

**THE DEVELOPMENT OF AN ENGLISH LANGUAGE
CLASSROOM RESEARCH MODEL FOR
IN-SERVICE ENGLISH TEACHERS**

Prayoon Chownahe

**A Thesis Submitted in Partial Fulfillment of the Requirements for the
Degree of Doctor of Philosophy In English Language Studies**

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การพัฒนาแบบจำลองการวิจัยในชั้นเรียนทางภาษาอังกฤษ
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การวิจัยครั้งนี้มีวัตถุประสงค์ คือ 1) เพื่อพัฒนาแบบจำลองการวิจัยในชั้นเรียนทาง
ภาษาอังกฤษ 2) เพื่อตรวจสอบประสิทธิภาพของแบบจำลองการวิจัยในชั้นเรียนทางภาษาอังกฤษ
ที่พัฒนาขึ้น และ 3) เพื่อศึกษาการรับรู้และปฏิกิริยาของครูประจำการผู้สอนวิชาภาษาอังกฤษที่มี
ต่อแบบจำลองของการวิจัยในชั้นเรียนทางภาษาอังกฤษที่สร้างขึ้น การศึกษาได้ดำเนินการ 7
ขั้นตอน ดังนี้

ขั้นที่ 1 การวิเคราะห์ความต้องการ เพื่อศึกษาความต้องการด้านเนื้อหาของหลักสูตรการ
ฝึกอบรมการพัฒนาวิชาชีพสำหรับครูประจำการผู้สอนวิชาภาษาอังกฤษ ตามประเด็นเนื้อหาของ
การศึกษาของครูผู้สอนภาษาที่สอง

ขั้นที่ 2 การตรวจสอบความสามารถด้านการวิจัยของผู้เข้าร่วมศึกษา เพื่อศึกษาผลจากขั้น
ที่ 1 โดยตรวจสอบความสามารถของครูผู้สอนตามการรับรู้ และความต้องการในการฝึกอบรม
เกี่ยวกับการวิจัยในชั้นเรียนทางภาษาอังกฤษ

ขั้นที่ 3 การพัฒนาแบบจำลองการวิจัยในชั้นเรียนทางภาษาอังกฤษ โดยสร้างแบบจำลอง
การวิจัยในชั้นเรียน โดยอาศัยสภาพศักยภาพและความต้องการในการทำวิจัยในชั้นเรียนทาง
ภาษาอังกฤษ ในขั้นตอนนี้แบบจำลองตรวจสอบโดยผู้เชี่ยวชาญทางด้านการศึกษาวิจัยในชั้นเรียน
จำนวน 3 ท่าน และทางภาษาอังกฤษที่ใช้ในแบบจำลอง จำนวน 3 ท่าน โดยใช้วิธีการวิเคราะห์
ความสอดคล้อง (IOC)

ขั้นที่ 4 การตรวจสอบประสิทธิภาพของแบบจำลองการวิจัยในชั้นเรียนทางภาษาอังกฤษ
เพื่อตรวจสอบประสิทธิภาพผ่านกระบวนการการฝึกอบรม โดยวิธีการตรวจสอบด้วยแบบกลุ่ม
ตัวอย่าง 1 ต่อ 1 กลุ่มตัวอย่างกลุ่มเล็ก และกลุ่มทดลองขนาดใหญ่

ขั้นที่ 5 การทดลองใช้แบบจำลองการวิจัยในชั้นเรียนทางภาษาอังกฤษ เพื่อตรวจสอบ
ประสิทธิภาพเพิ่มเติมโดยกลุ่มทดลองจริงโดยใช้กระบวนการการฝึกอบรมเชิงปฏิบัติการ

ขั้นที่ 6 การประเมินแบบจำลองการวิจัยในชั้นเรียนภาษาอังกฤษ เพื่อประเมินโครงการฝึกอบรมซึ่งตรวจสอบประสิทธิภาพของแบบจำลองจากขั้นที่ 4 และ 5 ตามแบบจำลองการประเมินของเคริกแพทริก (Kirkpatrick's Model) ซึ่งประกอบด้วยปฏิบัติการ ผลการเรียนรู้ พฤติกรรม ผลการดำเนินโครงการงาน และการพัฒนาศักยภาพทางภาษาของผู้เข้าร่วมอบรม

ขั้นที่ 7 การตรวจสอบขั้นสุดท้ายของแบบจำลองการวิจัยในชั้นเรียนภาษาอังกฤษ ปฏิบัติการโดยใช้ระเบียบวิธีการวิจัยปฏิบัติการ กระบวนการในขั้นนี้เพื่อให้ครูผู้สอนภาษาอังกฤษที่สมัครใจได้ปฏิบัติการวิจัยในชั้นเรียนทางภาษาอังกฤษในสถานที่ปฏิบัติงานจริง

ผลการวิจัยจาก 7 ขั้นตอน พบว่า

ขั้นที่ 1 การวิเคราะห์ความต้องการแสดงให้เห็นว่าครูผู้สอนวิชาภาษาอังกฤษมีความต้องการในด้านการวิจัยในชั้นเรียนทางภาษาอังกฤษ ในระดับ มาก

ขั้นที่ 2 การตรวจสอบความสามารถของครูผู้สอนวิชาภาษาอังกฤษพบว่า มีความรู้และความเข้าใจการวิจัยในชั้นเรียนตามการรับรู้ ในระดับปานกลาง และครูผู้สอนวิชาภาษาอังกฤษมีความต้องการวิจัยในภาษาอังกฤษในระดับมาก ซึ่งใช้เวลาอบรมในระยะ 1 - 2 วัน โดยมีผู้เชี่ยวชาญการวิจัยการสอนภาษาอังกฤษ ให้การฝึกอบรม

ขั้นที่ 3 การพัฒนาแบบจำลองการวิจัยในชั้นเรียนทางภาษาอังกฤษ โดยได้สร้างบทเรียนจำนวน 8 หน่วยการเรียนรู้ โดยศึกษาจากเอกสารที่เกี่ยวข้องตามรูปแบบการฝึกอบรมแบบ รีเฟล็กทีฟ โมเดล (Reflective Model) และในการตรวจสอบค่าความสอดคล้อง (IOC) โดยผู้เชี่ยวชาญทั้งทางการวิจัยในชั้นเรียน และทางภาษาอังกฤษที่ใช้ในแบบจำลอง มีความเหมาะสม

ขั้นที่ 4 การตรวจสอบประสิทธิภาพแบบจำลองการวิจัยในชั้นเรียนทางภาษา พบว่ามีประสิทธิภาพจากการตรวจสอบผลการเรียนรู้ของผู้เรียนระหว่างกิจกรรมและหลังเรียน (ตามแบบ E1/E2) ซึ่งมีค่าเท่ากับ 75/75 และผู้เรียนมีผลการเรียนรู้หลังเรียนฝึกอบรม สูงขึ้นกว่าก่อนฝึกอบรม อย่างมีนัยสำคัญทางสถิติที่ระดับ .01 และมีปฏิบัติการและความเห็นต่อการจำลองแบบการวิจัยในชั้นเรียนทางภาษาในทางบวก

ขั้นที่ 5 การทดลองใช้แบบจำลองการวิจัยในชั้นเรียนทางภาษาอังกฤษ พบว่า ผู้เข้าอบรมมีความก้าวหน้าโดยพิจารณาจากคะแนนการทดสอบหลังฝึกอบรมสูงกว่าก่อนฝึกอบรมอย่างมีนัยสำคัญในระดับ .01 มีปฏิบัติการ และความเห็นต่อการอบรมโดยใช้แบบจำลองการวิจัยในทางที่ดี

ขั้นที่ 6 การประเมินแบบจำลองการวิจัยในชั้นเรียนภาษาอังกฤษ พบว่าแบบจำลองที่ใช้ในการฝึกอบรมมีความเหมาะสมและมีคุณค่าต่อการวิจัยในชั้นเรียนภาษาอังกฤษและผู้เข้าอบรมมีความคิดเห็นในทางที่ดีต่อแบบจำลองในทางบวก

ขั้นที่ 7 การตรวจสอบขั้นสุดท้ายของแบบจำลองการวิจัยในชั้นเรียนภาษาอังกฤษ โดยใช้วงจรของวิจัยแบบปฏิบัติการ พบว่าเป็นผลของการใช้แบบจำลองการวิจัยในชั้นเรียนมีความเหมาะสม มีคุณค่า ส่วนในการปฏิบัติและครูผู้สอนวิชาภาษาอังกฤษที่เข้าร่วมโครงการสามารถทำการวิจัยในชั้นเรียนได้สัมฤทธิ์ผลจำนวน 10 เรื่อง

สาขาวิชาภาษาอังกฤษ

ลายมือชื่อนักศึกษา

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ลายมือชื่ออาจารย์ที่ปรึกษา

ลายมือชื่ออาจารย์ที่ปรึกษาร่วม

ลายมือชื่ออาจารย์ที่ปรึกษาร่วม

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THE DEVELOPMENT OF AN ENGLISH LANGUAGE CLASSROOM
RESEARCH MODEL/ IN-SERVICE ENGLISH TEACHERS

The purposes of this study were to: 1) develop the English language classroom research model; 2) examine the effectiveness of the developed English language classroom research model; and 3) investigate in-service English teachers' perceptions and reactions on the constructed English language classroom research model. The study was conducted in seven main phases.

Phase 1: conducting needs analysis aimed to study the needs analysis on a training course for in-service English teachers' professional development on the issue of the second language teacher education (SLTE).

Phase 2: Identifying participants' competencies was to study the competencies on conducting and needs on English language classroom research (ELCR).

Phase 3: Developing the English language classroom research) model was to construct the model based on the conditions of needs and competencies in conducting ELCR. This phase was proven by specialists keen on the classroom research method and English language used in the model with the Index Objective Congruence (IOC)

Phase 4: Assessing the efficiency of the ELCR model aimed to assess the model efficiency with the process of training through one/one, small and large grouped assessments.

Phase 5: Conducting the trial run of the ELCR model was to additional assessment of the model efficiency through the experimental group of training workshop.

Phase 6: Evaluating the ELCR model aimed to evaluate the training project which assessed the model efficiency from Phases 4 and 5. The evaluative model was the Kirkpatrick's model including participants' reactions, learning outcomes, behaviors, project results and language proficiency improvements.

Phase 7: Finalizing the ELCR model aimed to verify the outcomes of adopting the model. The process was to encourage the voluntary English teachers to conduct ELCR in actual workplaces.

The overall results from seven phases revealed that:

Phase 1: Conducting needs analysis implied the respondents' needs of English language classroom research at the 'most' level.

Phase 2: Identifying the participants' competencies indicated the perceived knowledge and understanding on the classroom research at the 'moderate' level, as well as the needs on the training course at the 'much' level within one to two days trained by the ELT research experts.

Phase 3: Developing the ELCR model was constructed into eight modules based on the related documents with the reflective training model and sounded appropriateness of the validity from Index Objective Congruence value (IOC) checked by three specialists in classroom research and three specialists in English language used in the model.

Phase 4: Assessing the ELCR efficiency revealed the appropriateness of the model through the training workshop and the appropriate model efficiency checked by

the process of during training and after training, E1/E2 process equaled 75/75. Besides, the trainees had learning outcomes of post-test scores were significantly higher than the pre-test scores at the 0.01 level. The trainees had the positive reactions and views towards the ELCR model.

Phase 5: Conducting the trial run of the ELCR model revealed the efficiency of the participants' progress in training which the post-test scores were significantly higher than the pre-test scores at the 0.01 level. The trainees also had positive reactions and views towards the ELCR model.

Phase 6: Evaluating the ELCR model revealed the appropriate and worthy training model, and the participants' had positive reactions and views towards the training project using the ELCR model.

Phase 7: Finalizing the ELCR model conducted by using the action research cycle revealed that the results of the ELCR model were worthy and appropriate in the research practices and 10 English teachers were able to complete their reports of English language classroom research.

School of English

Academic Year 2006

Student's Signature _____

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Prayoon Chownahe

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CHAPTER 1

INTRODUCTION

This chapter presents an introduction to the ongoing investigation and provides both the background and the context. It contains the rationale and the significance, purposes, research questions, scope and limitations of the study, definition of the terms, and finally the expected outcomes. The chapter also concludes an outline of the research project.

1.1 Rationale of the Study

Section 15 of the 1998 National Education Act includes the three main types of the education system; formal, non-formal, and informal education. For the formal education system, the Act specifies aims, methods, curricula, duration of learning strand, assessment and evaluation conditional to its completion (General Education Department, 1998). Section 16 of the National Education Act, classifies formal education into two levels: a) basic education which is provided up to 12 years; and b) higher education for over 12 years. Differentiation of the levels and types of basic education shall be as prescribed in the ministerial regulations.

Thereafter, the 1999 National Education Act introduces the latest reform of the educational curriculum. The previous curriculum did not encourage Thai people to follow current world changes in terms of: 1) the centralized curriculum had not adequately reflected the authentic needs of institutions in local areas; 2) curriculum management of mathematics, sciences and technology had not adequately supported

Thailand to become an academic leader in the Asian region, and therefore, the new educational reform aims to improve learning and teaching methods for creating new skills, processes and attitudes in mathematics, sciences and technology, and creative thinking; 3) previous curriculum had not sufficiently created the foundations of thinking and learning strategies for Thai people's life skills to efficiently encounter social problems and rapid changes in economy; and 4) *foreign language, especially the English language learning had not encouraged Thai people to sufficiently communicate and study from various learning sources in the information technology era* (Ministry of Education. 2001:1).

Additionally, the 2001 National Education Reform states that English is integrated within the new curriculum foreign language subject taught. The curriculum consists of four learning levels, which include the Preparatory, Beginning, Expanding, and Advanced levels. The fourth level is intended for upper secondary education. Each level contains four learning strands with the following intentions: Strand 1 for competency in English language communication, Strand 2 for appreciation of the language and its parent culture, Strand 3 for the utilization of the language as related to other learning needs, and Strand 4 for integrating local community interests into the growing "Global Community". In Strand 4, then, English is a learning instrument that enriches the individual: in his self-actualization as a human being, in his career (economic) opportunities, and as a productive participant in his society. Further in Strands 1, 3 and 4, the aims are to use English in practical, real-life communication situations, in pursuit of life-long educational goals, technological learning, career enhancement, and living as a productive partner in our growing global communities (Academy Department, Ministry of Education, 2002:19-20).

Thus, as to achieve students' general learning goals including English learning as a foreign language, the promulgation of the National Education Act: Chapter 7, Section 52 (General Education Department, 1999:24) states that the Ministry of Education strenuously promotes the development of a system for teachers and educational personnel. It includes production and further refinement for the academic personnel department, so that teaching will be further enhanced and become a highly respected profession. The Ministry will, in this regard, take a supervisory and coordinating role so that the institutions responsible for production and development of teachers, faculty staff, and educational personnel will be ready and capable of preparing new staff and continuously develop in-service personnel. In addition, the issue of teacher competency development in learning management is raised in the Basic Education Curriculum. The Basic Education Curriculum also states that it is the duty of the educational institutions to develop teachers to become professional. Thus, teachers have to be trained accordingly in order to have the required abilities, aptitudes, interests, and correct attitudes for learning and teaching (The Ministry of Education, 2001:27).

The Eighth Developmental Strategy of the policy assigned by the General Education Department in 2003 indicates that the educational personnel development under its jurisdiction has to be promoted for teachers' efficiency potential. The guideline indicates that teachers have to be professionally trained by professionals (General Education Department, 2003:32). Moreover, the policy of the Department of General Education illustrates the action framework for school quality assurance. Also, educational quality control must be included for the development of school standardization. The policy developmental projects have to include the developments

of teachers, administrators, and educational supervisors. The models and curricula for teacher development of this plan have to be set and supported. (Supervisory Unit of General Education Department, 1999:11-13). Additionally, the learning society indicates that the document of the consultant from the UK government in the sections of needs and potential usage from whatever is existing. It is obvious that the primary importance is directed towards of teachers' skills in aspects of using information technology in English, geography, history, modern foreign language and sciences. Finally, teachers need to pursue further education development in the process of technology (National Education Committee, 2000:19).

In addition to the earlier essence regarding English as a foreign language learning situations, researchers point out that many people have been learning to teach foreign languages for a long time. Yet, few in this field have paid much attention toward understanding how the processes of teacher learning actually unfold, or the knowledge and experience in teaching skills underlie those processes. Thus, most conventional practices in language teacher education have operated like hand-me-down stories, folk wisdom shared as 'truths' of the profession with little other than habit and convention on which to base them in language teaching (Freeman and Richards, 1996:351). Similarly, in the article entitled, "Teacher education and learning to teach: A research agenda," researchers at the National Center for Research on Teacher Education (NCTRE, 1998:27) noted, "Despite the plethora of suggestions, teacher education is still an unstudied problem. We know relatively little about what goes on in different teacher education programs and how teachers are affected. The fact that friends and foes alike of teacher education hold different conceptions of what

teaching is like, and what teachers need to know, and how they can be helped to learn makes it difficult to compare and evaluate the various proposals for them".

As its importance suggests the teacher development aims to improve and reform learning processes. Referring to the 1999 National Education Act, Section 30 states that educational institutions shall develop effective learning processes. In so doing, they shall also encourage instructors to carry out research for developing suitable techniques for learners at different levels of education (General Education Department, 2000:16). The Academic Department, Ministry of Education (2002:34) also identifies in the 2001 Basic Education Curriculum that the research development for learning improvement should be integrally carried out in learning processes. The procedures comprise the problem analysis, problem solving and improvement plans, data collection, conclusion, learning outcome report, and the application of research results. In second language teaching, Edge and Richards (1993:9) asserted that the classroom research is a growing emphasis on the requirement for the teachers to modify at the very least and in some cases to devise the curriculum for the learners. Teachers cannot be effective without knowing learners' needs, shaping teaching to those needs, and monitoring its impact. Furthermore, Nunan (1988) also indicated that teachers might become interested in researching their own classrooms involving in a period of intellectual and social change, and educational innovations. Teacher-researcher role logically ends at the point of professional self-development. Similarly, Nunan (1990) suggested that foreign language classroom research be carried out in the language classroom for the purpose of answering important questions about genuine situations in the classrooms to constitute the purpose of language learning and teaching. Owing to the essence of teacher development and classroom research,

Halbach (1999) ,Tanner, Longayroux, Beijaard and Verloop (2000), Kennedy (1999), Goldfus (1996) and Russell (1993) studied four teacher training programs for second language teacher education (SLTE) and found that teacher training, teacher education and professionalism in teaching EFL were reliable indicators of theoretical competence and practical skills. Teachers on an in-service training course lacked the necessary background and coping strategies to deal with pupils in the classroom situation. Those studies also found that there should have been needs to train teachers in linguistic awareness. Therefore, teacher development requires teachers' needs for a course or syllabus design.

Practically, the major guideline of the 2001 Basic Education Curriculum identifies that research is an instrument that supports the education reform to be efficient and effective, so research process employed together with learning processes can be achieved (Academic Department, Ministry of Education, 2002:10). The stated guideline includes:

- 1) Research employed in learning processes aims learners to conduct for their own partial learning in classrooms. Learners have to be able to do a research to find out their new knowledge or solve their learning problems. The research process will encourage learners' thoughts, planning, practice of task operation, and practice for reasoning integrating knowledge construction in authentic learning situations.

- 2) Research for learning development that guides teachers for improvement of learning itself. The process includes learning problem analysis, planning learning problem solving, data collection, and systematic data analysis. These guide teachers to do research and develop educational innovations traceable for learning quality.

- 3) Research for institutions' education quality, which is aimed at, and to be conducted by administrators. The research results can be verified as policy decision, planning, and organization administration.

Hence, it can be concluded that educational institutions have to promote research process for its learners, teachers, and administrators for educational quality support. In this case, it is inevitable that teachers have to be directly responsible for the second research aspect. For the first research aspect, teachers need to encourage their students to do; likewise, they need to know what to do in research processes for consultations with students. Moreover, in the final aspect, the ultimate responsibility is based on the administrators, but teachers need to deal with these guidelines purposed the cooperation of education quality.

In genuine education situations according to the regional research findings, Vihokto (1993), Artpru (2000), Chalardyaem (2001) and Thatthongs (2002) reported that primary and secondary school teachers in the Northeast including the Education Region 9 and Chaiyaphum Province in Education Region 11 lacked classroom research skills. The samples perceived that conducting research was difficult to perform but important, necessary and useful. They also reported at a high level that they had a poor level of knowledge, skills and self-confidence in fulfilling and conducting classroom research.

In English language learning and teaching, Nunan (1989:97) mentioned that the growing interest in classroom research and positive indications by teachers are signs of maturity within the language-teaching profession. The right method of language teaching improvement benefits incorporating a teacher-research component into professional development programs, especially outlining in-service workshop

programs for introducing teachers to the concept and providing them with basic skills and techniques for establishing their own research projects. Nevertheless, Mettetal and Cowen (2000), Nunan (1990), Steven (1997) and Bartels (2002) illustrate that the genuine state of language classroom- research orientation had been ignored. Second language teachers lacked interest in research on practice. The point is professional preparation and classroom research should be expected from the teachers to research their practice and their students' learning.

The investigations on needs analysis concerned with English language learning and teaching were exemplified as in Promsiri, Prapphal, and Vijchulata's (1996) and Manusilp's (1992). The investigations were on English teaching problems and needs in teacher training of upper-secondary English teachers in government secondary schools in Educational Region 12 and in the Educational Region 9 specifically in Khon Kaen Province. The results revealed that English teachers had a great desire for teacher-training programs concerning curriculum objectives, teaching methodology, measurement and evaluation, and knowledge and skills in teaching English. Besides, teaching aids were found to be the needs in a short training and a long training course. During the education reform, Chownahe (2003) investigated needs analysis on training of in-service English teachers in Chaiyaphum Province, and it was found that those teachers strongly accepted the highest needs on the training project on language classroom research. Similarly, the secondary school administrators viewed that this research type could be traceable and practical for language learning improvement according to the essence in the 2001 Reformed Curriculum.

Based on earlier problems, importance, essences and needs on training course and language classroom research, the development of English language classroom

research model was assumed to be specifically beneficial for in-service English teachers. It could also be assumed that the English language classroom research on second language learning contained specific language components beyond the research factor in general educational research. Due to the researcher's involvement of English language learning development in the local secondary schools, the present investigation wished to conduct an empirical study on the development of the English language classroom research model for in-service English teachers. The research practices and results from this study might be integral in the teacher development policy in terms of classroom research skills for learning process development relevant to an improvement of learning processes according to the 2001 Basic Education Curriculum.

1.2 Purposes of the Study

In accordance with the stated problems, the purposes of this study were to:

- 1) develop the English language classroom research model for in-service English teachers;
- 2) examine the effectiveness of the developed English language classroom research model; and
- 3) investigate in-service English teachers' perceptions and reactions on the constructed English language classroom research model.

1.3 Research Questions

In accordance with the stated purposes, three research questions were raised:

1.3.1 How could a practically and theoretically sound model of the English language classroom research for in-service English teachers be developed?

1.3.2 How effective was the developed model of the English language classroom research for in-service English teachers?

1.3.3 What were in-service English teachers' perceptions and reactions to the new model of English language classroom research?

1.4 Scope and Framework of the Study

As the research questions stated, the model of the training curriculum on English language classroom research for in-service English teachers was constructed based on the reflective model in the training sessions of assessing and trialing phases . The scope and framework of the study were illustrated in accordance with the theoretically instructional design starting from before organizing the research proposal to the last phase of conducting the research thoroughly as follows:

1.4.1 Training Model

The ongoing investigation focused primarily on how to conduct a training curriculum for in-service English teachers. Training foreign language teachers as the professional education, Wallace (1991:14-15) suggested that the reflective model gives due weight both to experience and to the scientific basis of the profession. Therefore, teacher education has two main dimensions:

1.4.1.1) Received knowledge

Amidst the conclusions is vocabulary of the subject as English language classroom research in accordance with concepts, research findings, theories, skills, and the necessary intellectual content of the profession. So, currently, it might

be expected that a skilled language teacher will be able to speak the target language to a reasonable degree of fluency, to organize group work, and to be familiar with certain grammatical terms in a training project.

1.4.1.2) Experiential knowledge

Here, the trainee will have developed knowledge-in-action by practice of the profession, and moreover, will have had the opportunity to reflect on that knowledge in action. It is also possible to develop experiential knowledge by the observation of practice, although this 'knowledge-by-observation' is clearly of a different order from 'knowledge-in-action'.

Therefore, an alternative model for teacher education of the present training project will be called the 'reflective model' that could be summarized in Figure 1 (Wallace, 1999:15):

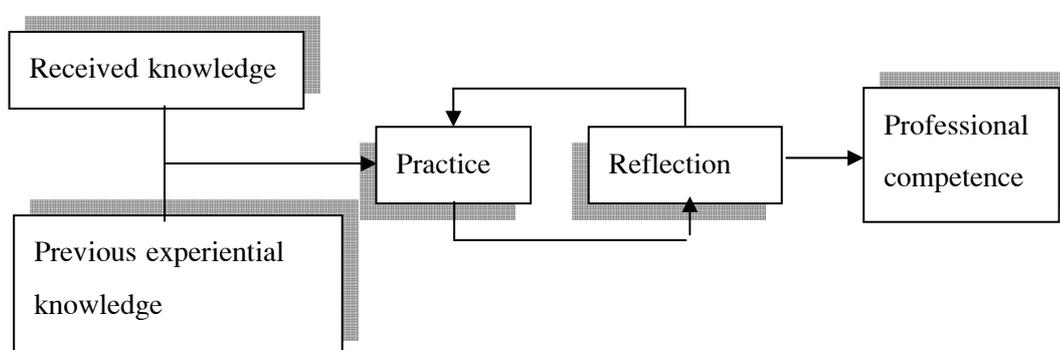


Figure 1: A Reflective Model

The above diagram illustrates that trainees' knowledge comprises received and previous experiential knowledge as the 'input' and the needs to practice in the training project as the 'process' of the training. After the practice session, trainees need to reflect as the 'output' on the training project. Finally, the trainees' expected professional competence would be assessed.

1.4.2 Constructional strategies of the English language classroom research model

The present investigation intends to design an English language classroom research model. Dick, Carey and Carey (2001:6-8) state that theoretically, the design in instructional system that aims to adapt for the ongoing study is consisted of different parts of the English language classroom research (ELCR) as follows:

Phase 1: Conducting needs analysis

Phase 2: Identifying the participants' competencies

Phase 3: Developing the ELCR model

Phase 4: Assessing the efficiency of the ELCR model

Phase 5: Conducting the trial run of the ELCR model

Phase 6: Evaluating the ELCR model

Phase 7: Finalizing the ELCR model

1.4.3 Model of an anticipated English language classroom research (ELCR)

The contents of anticipated language classroom research (LCR) model basing on Nunan's (1992), Nunan's (1989), Lier's (1988), and Wallace's (1998) would be constructed from the following modules:

1.4.3.1) Identifying background knowledge of ELCR

This point comprised definition, research scope, value, characteristics, process, and limitation of the language classroom research.

1.4.3.2) Basic elements of ELCR

The basic elements covered major issues of learning by instruction, roles

and teacher talk, learner behaviors, classroom interactions, and learning strategies, evaluating and developing the problems, valuables and hypotheses of the language classroom research.

1.4.3.3) Review of related literature of ELCR

This topic included definition, characteristics, objectives, importance and selection, writing the report and referencing of the related literature.

1.4.3.4) Developing innovations in ELCR

This module was consisted of definition and characteristics, category, the role and development, and example cases of innovation development in the English language classroom research.

1.4.3.5) Designing an English language classroom research

This point includes the quantitative research consisted of major components of experimental research, single group designs, and quasi-experiment designs. Moreover, it covers the qualitative research in terms of the necessity and how to conduct the qualitative research.

1.4.3.6) Collecting data through English language classroom research

This part is composed of determining what constitute data, the process for quantitative research, and the description of the data collection procedures in qualitative and quantitative researches typical use in the second language classroom research. Furthermore, it includes issues and problems and assuring the quality of the data and data collection procedures.

1.4.3.7) Analyzing data through language classroom research

This point covers data analysis and the design of the study, analyzing qualitative data, descriptive research, and analyzing experimental research data.

1.4.3.8) Reporting, summarizing, and interpreting the results

This part includes reporting and summarizing of quantitative and qualitative research, interpreting the results, and reporting research.

Basing on the content above, the details are mentioned in the issue of the review of related literature and the curriculum of the English language classroom research which was the instrument of this study; however, it can be briefly illustrated for the research framework and procedures in Figure 2.

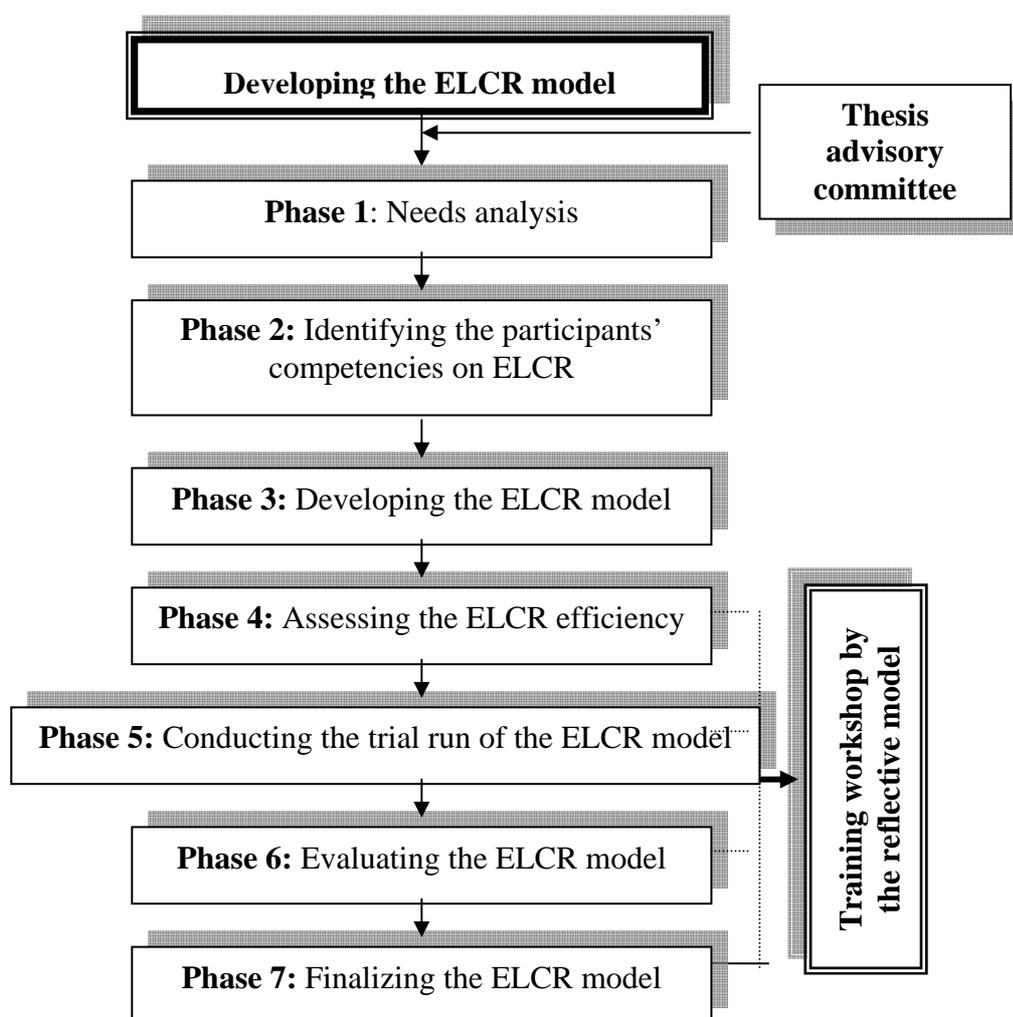


Figure 2: Conceptual framework of the study

1.5 Research Assumption

Strictly speaking, the subjects taking part in this study completed the bachelor degree in any fields related to English language teaching. They also used to enroll in at least a basic course of educational research and take part in the classroom research training for teachers' professional development but in general education. The results from every stage of the study could imply the effect from the training activities of the ELCR model. Also, the results could be specifically referred to English teachers in the Office of Educational Service Area in Chaiyaphum Province. This study focused on the research methodology of the linguists specialized in ELT particularly the processes of the English language classroom research.

1.6. Expected Results

Like in some other factors of learning improvement, the expected results from developing the English language classroom research model could benefit the followings:

1.6.1 The English language classroom research model could be a practical method for English teachers to achieve their ongoing classroom research for learning improvement.

1.6.2 In-service English teachers trained in the trail phase were assumed to gain English language classroom research knowledge and able to fulfill their classroom research skills in practices.

1.6.3 Those teachers could become consultants for helping to improve other English language teachers 'some teaching skills.

1.6.4 Referring to the training workshop of the ELCR model in-service English

teachers in a regional area could probably have more opportunities to improve their teaching practices together with up-grading their own language communication.

1.6.5 According to the current learning and teaching curriculum, English language classroom research is one of the main purposes to improve learning process. The training curriculum based on this research could have been the specific curriculum and traceable for English teachers who were interested in developing learning processes and improving their working positions due to the policy of education reform.

1.7 Definitions of the Terms

To help readers understand the present study, definition of the terms are indicated as follows:

1.7.1 Development refers the development of an English language classroom research model for in-service English teachers, the participants from the Office of Educational Service Area in Chaiyaphum Province.

1.7.2 English language classroom research model refers to the model of the developed curriculum on the knowledge and understanding of English language classroom research based on: 1) background knowledge 2) basic elements, 3) review of related literature, 4) innovation development, 5) designing the research, 6) collecting data, 7) analyzing the data, 8) reporting, summarizing, and interpreting the results. The overall models based on the content of language classroom research according to the linguists' language practices.

1.7.3 English language classroom research (ELCR) based on Nunan's definition (1989:12), it means the action research as a way of increasing our knowledge of classrooms and as a tool in teacher education. Besides, Nunan (1990) states its meaning as second language classroom research that is carried out in the English language classroom for the purpose of answering important questions about the learning and teaching of foreign languages. Lastly, the Ministry of Education (2002) states that it is an instrument for learning improvement specifically developing learning process in classrooms, especially in foreign language learning.

Here, language classroom research refers to the small-scaled research conducted by teachers for the improvement of English language learning and teaching in classrooms.

1.7.4 In-service English teachers refers to teachers who taught English subjects in the secondary schools under the jurisdiction of the Office of Educational Service Area , Chaiyaphum Province both in Area 1 for the assessing the curriculum model and Area 2 for the trialing phase.

1.7.5 Chaiyaphum Educational Service Area Office 1 refers to the area of educational division following to the latest Educational Reform that covers schools in Muang, Khon Sawan, Ban Kwoaw, Nong Buadaeng and Pukdeechumpol Districts.

1.7.6 Chaiyaphum Educational Service Area Office 2 refers to the area of educational division according to the latest Educational Reform, that covers Kaengkro, Phukhiow, Kohn Sarn , Kasetsoomboon, and Ban Thaen Districts.

1.7.7 The ELCR model here stands for the English language classroom research model intended to develop in the process of the present investigation.

This chapter presents the rationale and background, which contribute the purposes and the research questions of the study on a development of the English language classroom research model for in-service English teachers. This investigation also studied the effects on developing process of the ELCR model earlier stated. In addition, this chapter illustrates the research questions to indicate the expected results, significance, and the model of the ELCR framework, research assumption, and definitions of the terms.

In order to achieve the research objectives, the researcher intended to review the related literature and the past research on the development of the curriculum model, teacher education specifically in-service teachers, English language classroom research, and the training model in Chapter 2.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter discusses the related literature from textbooks, journal articles, and theses. The related literature from which the conceptual framework derived includes the following topics:

- 2.1 English language teaching and teacher education
- 2.2 In-service education and training
- 2.3 Curriculum development in English language teaching
- 2.4 English language classroom research
- 2.5 Teacher research and professional development
- 2.6 Reflective model and the mode of teacher education courses
- 2.7 Related studies

2.1 English language Teaching and Teacher Education

Regarding to the English language teaching and teacher education, Wallace (1991:2) mentions that as the pressure to communicate in 'the age of communication' increases, the divisions of English language are felt even more noticeably. So English language teaching, which is seen as international channels of communication, becomes even more important.

With the explosion in English language teaching there has been an increased demand for English language teachers and the consequent need to train those teachers.

Thus, English language teachers find themselves in the position of being trainers of English language teachers or in some way responsible for the professional development of English language teachers. Parallel with an educational change, there has been the growing feeling that English language teaching professionals can, and must take on the responsibility for teacher development. English language teaching and teacher education are essential components for teaching to be considered as a worthy 'profession' and teachers have to consider themselves as 'professionals'. Indeed, the advantages to be gained in looking at teaching as a highly regarded profession on par with other professions will enhance the organization of training programs for teachers. Additionally, a major goal of a teacher education course should be to give teacher-learners tools for the improvement of professional development (Lange, 1990:245-265 & Pennington, 1990:132-151). As Smith (2001:100) points out that somehow the teacher education program, this program is expected to lead the teacher to a better understanding of his or her own competencies.

Richards (1998:13) also states that in teacher education, the beliefs, theories, knowledge, and practices of second English language teachers can become the focus of its processes. A wide range of interconnected questions confronting anyone involved in the pre-service or in-service education of English language teachers or the design and evaluation of teacher development programs are as follows:

- a) How is the field of second English language teacher education (SLTE) defined, and what does it encompass?
- b) On what theories, research, and practices of SLTE based on?
- c) What knowledge base is appropriate for pre-service and in-service teachers?

- d) What beliefs and principles do teachers hold, and how do these influence their practice?
- e) What constitutes skills and expertise in second English language teaching?
- f) What role do activities play in facilitation the professional development of teachers?
- g) What is the relationship between the content of a teacher education program and the practices of its graduates?

As early stated, English as an international English language is widely communicated in the age of globalization, English language teaching and teacher education are considered to be one of the most significant aspects in developing English language learning programs. Teachers as 'professional' people should be guided to a better understanding of their own competencies. The linguists on English language teaching have tried to identify the domains of content and knowledge constituting the knowledge based on second language teacher education (SELT), namely, general theories of teaching, teaching skills, communication skills, subject matter knowledge, pedagogical reasoning and decision making, and contextual knowledge. Thus, a general background as stated is essential for teacher education perspectives that can be traceable for an objective of an in-service English teacher training in this study.

2.2 In-service Education and Training

In-service education and training (INSET) defined by Bolam (1986:18 cited in Roberts, 1998:219), the INSET includes education and training activities engaged in by teachers and principles, following to their initial professional certification, and

intended primarily and exclusively to improve their professional knowledge, skills and attitudes in order that they can educate children and learners of all ages effectively.

In-service education and training is considered to be rich variety and ways teachers learn, the importance of context and social relationships, and an argument or a view of INSET as a process, not as a collection of isolated events. Roberts (1998:219-236) indicates the focal design of INSET as the following aspects:

2.2.1 Training and development

In-service teacher education and training (INSET) can address training or development needs. Training is characterized by objectives that are defined by a deficit in English language, teaching skills, curricular knowledge or some other area of expertise. A training orientation to INSET can be associated with the concept of a teacher as an operative employee, which implies that the employer controls his or her learning. The notion of development implies more divergent objectives, which allow for teachers' individual differences and which are determined by teachers' sense of their own learning needs. It presumes competence in basic skills and knowledge.

2.2.2 Provider roles

In the context of training objectives, INSET provider roles are involved in self-directed problem solving and acting as a 'process leader' to help teachers focus, structure and sustain their work. A provider provides and directs teachers' individual discussion and support, materials, experience as English language learners and background principles.

2.2.3 Needs and types of program

This section suggests four types of INSET, according to how they are initiated and their purposes.

- a) Programs in co-ordination with initial teacher education (ITE), where elements of ITE are built on once teachers have had some experience (e.g. in a staged system of qualifications).
- b) Centrally determined programs, controlled by a central authority, usually to attain long-term educational outcomes set by government policy.
- c) Locally determined content, with local control: emphasis on system needs, met by local providers with a clear brief set by the administration but with attention to local conditions.
- d) Determined by individual needs: emphasis on the personal or professional development of teachers.

In all INSET there is tension between the needs of the system and those of the individual. Needs diversity is caused by a unique of circumstances: school culture, working relationships, past history, physical layout and pupil characteristics.

2.2.4 Ways of learning

Teachers may learn in many ways, with formal programs as Roberts (1998) suggests. Those programs offer as follows: a) teaching development of skills, b) professional collaboration, teachers roles with other teachers, c) innovation and research concerning with materials and doing research for a higher degree, d) helping other teachers learn - providing a course or skills work for others, e) courses/formal situations - higher education or short conference courses, and f) self-study of teachers, and English language learning.

To conclude, in-service education and training (INSET) implies that this study aims to focus on seven domains of content that have been identified as forming the core knowledge base on the second language teacher education ,SLTE (Richard,

1998) and the regulation of teachers as stated in the current basic curriculum. They include theories of teaching, teaching skills, communication skills, subject matter knowledge, pedagogical reasoning and decision making, contextual knowledge and teacher research. The focus on these dimensions of teaching as the foundation of SLTE is an attempt to give priority to teaching itself and to acknowledge the complexity of what teachers understand about the nature of effective second language teaching.

The taxonomy of SLTE instructional approaches likewise reflects an attempt to examine teaching from multiple dimensions and illustrates some of the trends of SLTE practice as Richards and Nunan (1990) indicated as follows:

- a) a movement away from a 'training' perspective to an 'education' perspective, and recognition that effective teaching involves higher-level cognitive processes, which cannot be taught directly
- b) the need for teachers and student teachers to adopt a research orientation to their own classrooms and their own teaching
- c) less emphasis on prescriptions and top-down directives and more emphasis on an inquiry-based and discovery-oriented approach to learning (bottom-up)
- d) a focus on devising experiences that require the students teacher to generate theories and hypotheses and to reflect critically on teaching
- e) less dependence on linguistics and English language theory as a source discipline for second language teacher education and more of an attempt to integrate sound, educationally based approaches
- f) use of procedures that involve teachers in gathering and analyzing

data about teaching

In order for this to happen, it is suggested that practitioners of SLTE or providers of INSET need to reach consensus on what the fundamental nature of the field is and how its pedagogical content knowledge should be defined. In many situations, SLTE still reflects the history of its development as a branch of applied linguistics. A consistent approach or philosophy of SLTE has not yet emerged to serve as a basis for sound instructional practice. If the movement away from language-based to more of a teaching-based approached knowledge and accompanied instructional practices, it will need to be evaluated to ensure that the process of teaching assumes a more prominent role within the field of second language teacher education and methods as summarized in Figure 3 (Adapted from Richards, 1998).

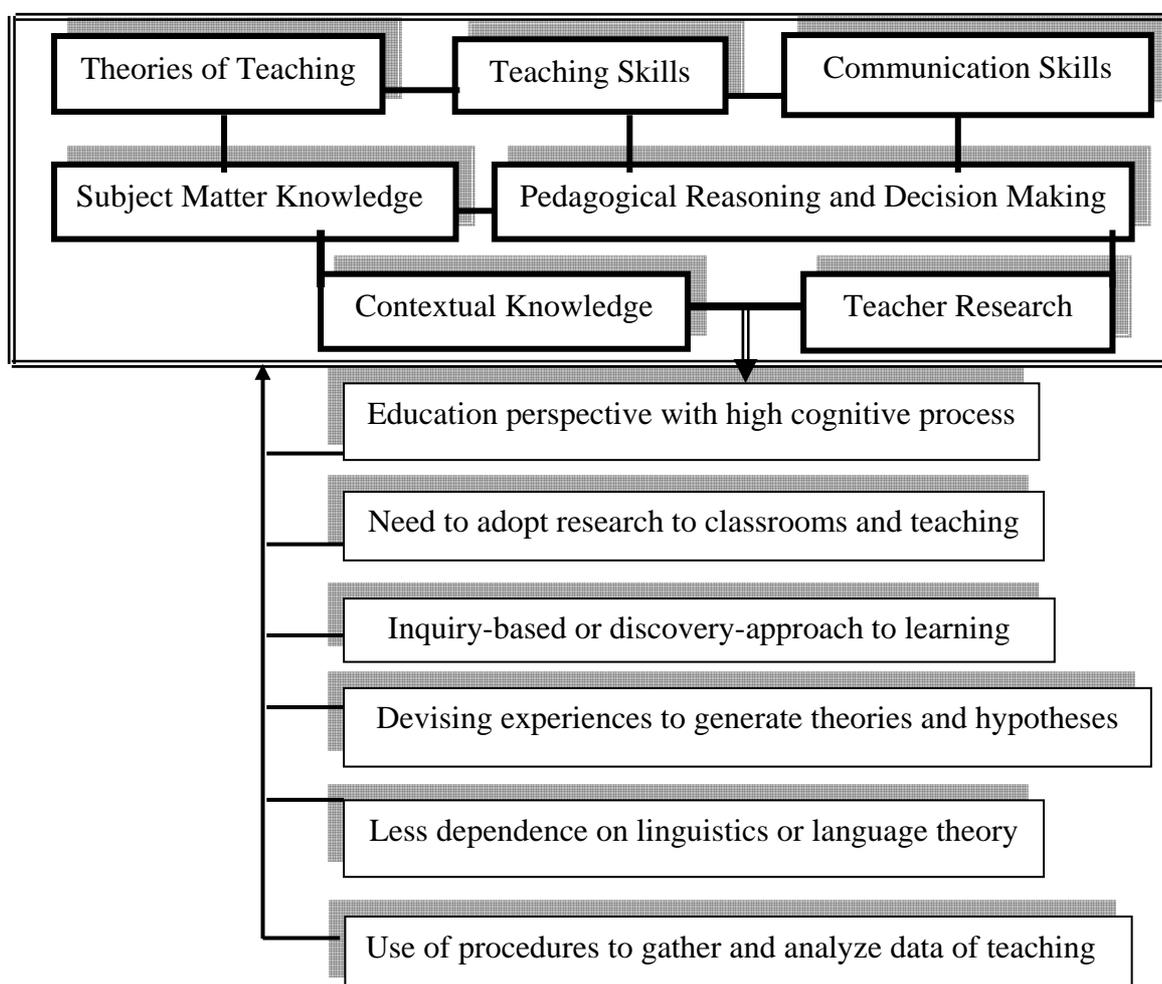


Figure 3: Scope of second language teacher education (SLTE) and methods

2.2.5 The INSET Cycle

In-service education and training (INSET) for teacher learning takes time as Roberts (1998:230-236) suggested that it is gradual and cumulative; it requires a mix of experience, reflection, discussion and input. It focuses changes as teachers' thinking, practices and self-awareness changes. Therefore, INSET needs to be sustained over time. It should be seen as a process, not as a series of one-off events.

Need assessment and evaluation are of central importance in sustaining INSET. They enhance the continuity of INSET programs in the face of forces that oppose it: funding changes, teachers move on, staff turn over. They enhance relevance because they monitor teachers' needs as they evolve time. Helpful guidelines on needs assessment and evaluation that Cline et al. (1990) direct as appeared in Figure 4:

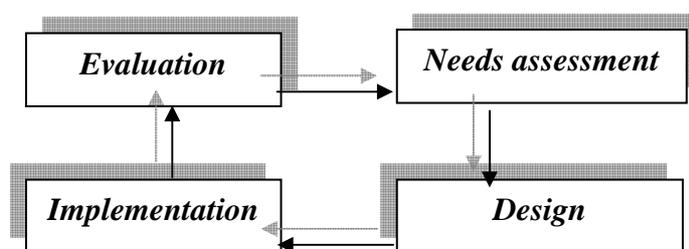


Figure 4: The INSET cycle

2.2.5.1 Needs assessment

Needs assessment in the INSET cycle consists of components that can be taken into consideration for the design of needs analysis in the present investigation as the following aspects suggested:

- a) Real and apparent needs

Teachers' participation in courses does not necessarily mean that they are fully

relevant to their needs. It is associated with the chance to attend a course related to teaching that teachers will usually take. It may well be that teachers follow courses because they are available rather than because they address their most prominent needs. They attend content courses, which they value meeting their highest stated priorities, and personal enrichment and active learning. These suggest that in their context, there is not a wide enough range in INSET programs available.

b) Professional development

Models of professional learning have particular relevance for needs assessment. In particular, the notions of ownership and participation have generated structured consultative needs assessment methods. There is a direct link between teacher commitment and ownership, and needs assessment method:

Other assumptions about professional learning which have implications for needs assessment are summarized in Table 1 (Roberts, 1998:232):

<i>Assumption</i>	<i>Implication</i>
Ownership: a sense of participation maximizes effectiveness at work and in professional learning	Participation can develop with the use of consultative needs assessment methods
Teacher learning is 'adaptive and heuristic', i.e. it takes place as a series of trial-and-error experiences	It is essential to incorporate action planning with the assessment of needs.
Teacher learning is evolutionary and nonlinear	Perceptions of needs will evolve as the teacher experiences INSET activities
Teacher learning should be linked to curriculum development in school	Both system-wide and individual needs can be addressed through participation in curriculum development with 'local' support
Teacher learning is critically influenced by school and local constraints and opportunities	Needs assessment must reflect the real conditions of teachers' work
Teachers possess 'important clinical expertise', i.e. teachers know their classroom best	Teacher development activities should be maximized to this fullest use of the teachers own resources

Table 1: Teacher development and needs assessment

Table 1 above describes a paradigm in the whole approach to staff development. The essence of that shift changes the perspective that sees all decisions, plans and program determined by authorities outside the school to a perspective, which sees them as being determined by teachers who in reality do decide what and how their students will learn. The assumption and implication are based upon extensive experience with self-directed learning for students and with self-directed professional development for teachers.

These assumptions may not apply in most centralized, hierarchical or authoritarian systems, within which pupils, teachers and external agencies may have a very different orientation to their roles. In a system of the top-down approach, it might be the only ecologically viable approach to INSET design, because teachers are restricted on an 'employee' role in which the employer determines occupational learning needs. However, it is possible for centralized systems to set up support systems for individual teachers in schools, often in parallel with centralized structures.

c) Planning a needs assessment: key considerations

Roberts (1998:233-234) states the key considerations as follows:

- Providers should recognize that different participants may have different needs, which have to be traded off against each other. Tensions and conflicts of interest have to be addressed and resolved, e.g. between those of pupils, teachers, the department/group staff, the school, the local authority and beyond.
- Therefore, a needs assessment should be seen by all parties as fair, open, and capable of reflecting the needs of all and not just of those in authority.
- Needs assessment is a participative approach to INSET integrating reviewing with plan for action: the 'focus is on review leading to development for

improvement and not on something that stops short at the review stage. It is essential to design needs assessment and planning for action as part of one process.

- In carry out needs assessment, practical considerations include:
 - what the emphasis of the needs assessment should be (individual, group, school);
 - relative economy in methods of obtaining and analyzing information;
 - adequate time to obtain information;
 - adequate time for the analysis and dissemination of results; a match between procedures and the administration's policy on consultation with staff;
 - which interest groups might be affected;
 - how feasible it will be to meet needs once they have been expressed.
- In general, one should consider the dynamic consequences of needs assessment on colleagues:
 - the process by which needs assessment is carried out will signal the attitude of the school/provider to teachers' involvement in their own learning;
 - teachers should not feel 'isolated' by lack of time or lack of access to information;
 - there may be tension between personal, occupational and institutional needs, which will have to be addressed;
 - once a needs assessment is done, there is an implied commitment to action, which should be seen to be met.

2.2.5.2 Methods

Needs assessment methods are common to research, evaluation, and syllabus design: watching (observation) and asking (questionnaire) and interview. Applied linguists outline methods in terms of numbers of informants and economy of data collection. In the case of one-to-one data collection, which is time-consuming and appropriate to small groups, open-ended interviews, questionnaires with open-ended questions, and structures classroom observation may be appropriate. With larger numbers of teachers, structured group discussion, structured questionnaires and selective-based observation might be more appropriate. In general, pressure of time suggests systematic large-scale observation is often impractical because it makes great demands on staff time. Needs assessment method can be summarized in Table 2 (Roberts, 1998:234-235):

Individual	Group
Interview	Group discussion e.g. nominal group technique, focus groups
Questionnaire	Questionnaire e.g. DELPHI, GRIDS
Checklist	Checklist

Table 2: Needs-assessment methods

2.2.5.3 Evaluation

The evaluation of one activity indicates needs for the next. Similar technical and interpersonal issues arise. In Roberts' (1998) view, the evaluation is never neutral, often uncovering tensions, rivalries and conflicting interests in an institution, and so it is essential to plan carefully before introducing them. Above all, the evaluation of the teacher education can improve teacher participation and

ownership if real consultation and information sharing take place It is essential to plan carefully before introducing them (Weir and Roberts, 1994:235 cited in Roberts (1998). The guidelines to plan can be illustrated in Table 3:

What to evaluate	*Focus evaluation on the purposes and specific objectives of the INSET activity
Why	*Determine how information will be used, by whom and with what tangible outcomes *Evaluation data are likely to identify developments in teachers' perceptions of their needs and priorities
Who does it	*Identify who is responsible to collect and distribute data involve other participants by sharing information
How	*In principle, methods are the same as for needs assessment (interview, discussion, questionnaire etc.) *Considerations of economy and time are vital: evaluation findings should be provided on time so they can contribute to decisions

In summary, the purpose of the early discussion is to offer a general framework for INSET design. The INSET cycle discussed can be traceable for the process of research framework in the present study. The cycle covers needs assessment, design, implementation and evaluation cycles. The topic discussed indicates the rich variety of ways teachers learn the importance of context and social relationships. It then suggests the diversity of teachers' needs and an INSET planning. The aim of the present investigation is to develop a curriculum on English language classroom research for in-service English teachers. Consequently, the discussion is likely to be traceable for developing the curriculum of the INSET for ELT. The methods in the needs analysis procedures were the survey used by questionnaire and the semi-structured interview. The investigation revealed that in-service English teachers needed a training course on English language classroom research for professional development in current educational reform of Thai settings.

2.3 Curriculum Development in English language Teaching

A course design is the practice of setting a definite criterion for the success of a course. In English language teaching (ELT), linguists define the curriculum development as in the following details:

2.3.1 Definition

The term “curriculum development” in English language teaching, Richards (2001:1-2) suggests that English language curriculum development is an aspect of a broader field of education activity known as curriculum development or curriculum studies. It focuses on determining what knowledge, skills, and values students learn in schools, what experiences should be provided to bring about intended learning outcomes, and how reaching curricular goals and learning in schools or educational systems can be planned, measured, and evaluated.

Besides, Briggs (1976:20) defines a term “instructional design” involving the curriculum development as the entire process of analysis of learning needs and goals and the development of a delivery system to meet the needs. It includes development of instructional materials and activities and experiments and revision of all instructions, learners and assessment activities.

In addition, Dick, Carey and Carey (2001:2) introduce that it is an instructional design that involves a systematic process in which every component (i.e. teacher, learners, materials, and learning environment) is crucial to successful learning. This perspective is usually referred to as the system points of view, and advocates of this position typically use the systems approach to design instruction. The instructional process itself can be viewed as a system. The purpose of the system is to bring about learning. The components of the system are the learners, the instructor, the

instructional materials, and the learning environment. These components interact in order to achieve the required goal. In terms of English language teaching, it involves the components of the instructional system, which brings about learning both input and output of learning process.

Finally, Brown (1995:1) views that English language curriculum is a system whereby all language teaching activities that can be classified into approaches, syllabuses, techniques, exercises or packaged pedagogies. This series of curriculum activities will provide a framework that helps teachers to accomplish whatever combination of teaching activities is most suitable in their professional judgement for a given situation, that is, a framework that helps the students to learn as effectively as possible in the given situation.

The definitions stated above support the English language curriculum development that covers the field of applied linguistics, Richards (2001:1-2) addresses the issues of:

- a) procedures that can be used to determine the content of an English language program
- b) learners needs
- c) how to determine learners needs
- d) contextual factors need to be considered in planning an English language program
- e) the nature of the aims and objectives in teaching and how they can be developed
- f) factors involved in planning the syllabus and the units of organization in a course

- g) how good teaching can be provided in a program
- h) issues involved in selecting, adapting, designing instructional materials, and
- i) measurement of the effectiveness of an English language program

These issues describe an interrelated set of processes that focuses on designing, revising, implementing, and evaluating English language programs.

2.3.2 Curriculum approach in English language teaching

Among wide areas of educational thought, practice and curriculum, and training manuals, Richards (2001:40) also presents the approaches of curriculum design as follows:

- | | |
|-----------------------|-----------------------------|
| 1. NEED | 2. PLAN |
| Aims Objectives | Strategies Tactics |
| 3. IMPLEMENTATION | 4. REVIEW |
| Methods Techniques | Evaluation Consolidation |

Briggs (1977:1) additionally indicates and summaries an instructional design that is a systematic approach to the planning and development of a means to meet these instructional aspects: a) needs and goals, b) all components of the system covering objectives, instructional materials, tests, etc. These are considered in relation to each other in an orderly but flexible sequence of processes. The resulting delivery system is tried out and improved before widespread use is encouraged.

An instructional design approach provides and benefits educational development in various ways. Wager (cited in Briggs, 1977:407-417) illustrates designing courses for higher education in the project of instructional technology and higher education. The tailored design steps comprise these processes:

- a) Need analysis and job analysis, b) goal and learning task analysis, c) the

specification of behavioral objectives, d) analysis of constraints and resources, e) media selection, f) designing delivery systems, g) diffusion , h) assessing learner performance, i) designing instructional activities, j) formative evaluation and revision, k) teacher training, and l) summative evaluation.

General principles for designing a proportional syllabus that Yalden (1987:93-94) advises include stages of English language program development as in Figure 5:

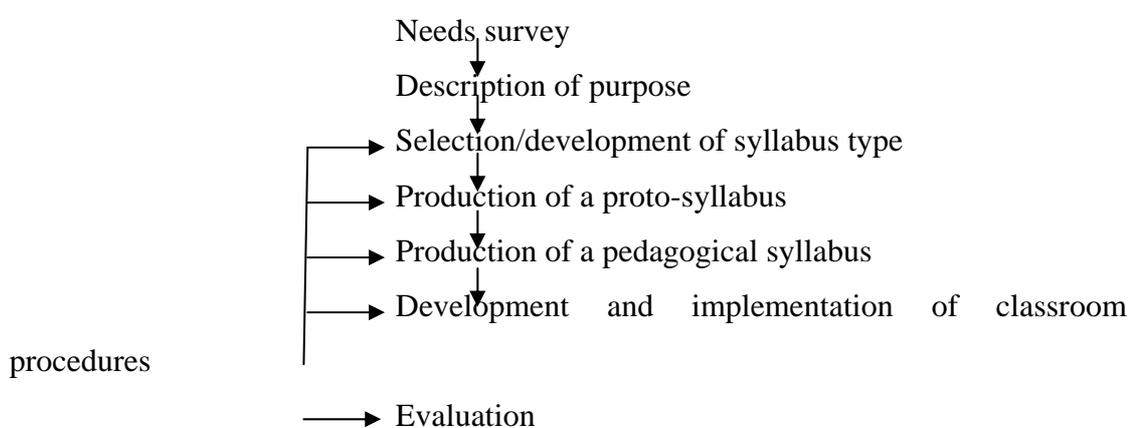


Figure 5: Stages in English language program development

More discussion on general curriculum planning in Dubin & Olshtain's (1986:2) classifies the curriculum processes for second or foreign language course designers in a brief review as: a) diagnosis of needs, b) formulation of objectives, c) selection of content, d) organization of context, e) selection of learning experiences, f) organization of learning experiences, and g) determination of what to evaluate and the means to evaluate.

The discussed processes can be concluded that the course design, curriculum development, or the INSET cycles in this research include similar procedures. However, the first step of needs analysis from all procedures in a course design is the most crucial that a course designer has to inevitably be aware of learners need in English language teaching. The INSET program intended to conduct in the present

study aims to develop a training curriculum on English language classroom research for in-service English teachers' based on their needs for contributing an anticipated training course based on the INSET procedures.

2.4 English language Classroom Research

2.4.1 Definition of English language classroom research

In English language teaching settings, linguists have similarly defined English language classroom research as the following points of view:

According to Allwright and Bailey (in LoCasto, Virginia, 1991, online) classroom centered research (CCR) concentrates on classroom interaction what-- goes on between and among teachers and students-- in order to gain insights and increase teachers' understanding of classroom learning and teaching. Kochis (2003, online) tentatively defines classroom research that it is more than just teaching techniques and tricks, though; its basic idea might be best described as "the systematic investigation of the effects of teaching on student learning for the purpose of improving instruction." It consists of two aspects: a) a repertoire of techniques for getting information from students about their learning and b) man effort to organize that information into a larger picture of practical learning theory.

For the purpose of English language classroom research, Allwright (1988:91) expands the definition of classroom research (or classroom-centered research) that it is the research concentrates on the inputs to the classroom (the syllabus, the teaching materials) or on the outputs from the classroom (learner achievement scores). It does not devalue the importance of such inputs and outputs. It simply tries to investigate what happens inside the classroom when learners and teachers come together. It is

also in fact research that treats English language classroom not just as the setting for investigation but, more importantly, as the object of investigation. Classroom processes become the central focus.

Moreover, Lier (1988:9-16) suggests the context of L2 classroom research that the central data derive from things that go on in the classroom. The teacher as researcher spends most of the time during the data-gathering phase(s) of the project inside actual, regular, ongoing classrooms that have not been specially set up for the purpose of research. In a classroom, actions occur in a context. What is said and done is influenced by what happened before, and influences what happens next. Some instances of classroom interaction occur because they have been planned to occur that way, others because circumstances at the moment demand action and reaction.

For classroom research and L2 development, the success of a course of English language studies in a classroom is judged in terms of the *product*, that is, learners' terminal proficiency. In the classroom interaction occurs interaction among teachers, learners and materials (or content matter of any kinds). It is the essential element of the classroom. The main purpose of the second-language classroom is to develop the formal classroom as supplementing, complementing, facilitating and consolidating, so L2 development in such environments is concerned. Then the L2 lesson becomes a language arts lesson. Focusing on English language skills and academic growth, much in the same way as the L1 lessons, refining and building upon development had already achieved in the informal settings.

According to the view on the scope of classroom research in the theme of English language learning and teaching, Lier (1988:9-16) sees as the following: 1) the nature and development of *interlanguage*; 2) the role of *communication* and

interaction; 3) the use of *strategies*; 4) variations in *learning*: styles and modes and 5) the centrality of *evaluation*, including feedback and knowledge of results.

To the conclusion from the previous discussion, classroom research concerns with the inputs in the classroom settings, teacher and learner interaction, syllabus and materials. The outputs, classroom achievements resulted from the classroom are also concerned. In terms of L2 classroom research, it centers on a classroom as English language learning and teaching environments. Classroom research also promotes English language skills and academic achievement. The scope can be dealt with the development of interlanguage, communication, interaction, strategies, learning styles and classroom evaluation.

2.4.2 Major issues in second language classroom research

Chaudron (1988:1-3) proposes that this research extensively investigated into the types and the quantities of instructional and non-instructional tasks, the relative amount of participation by the teacher and the students, and the functions and forms of language interaction. At the same time, various personal, attitudinal, cognitive, and other individual or social factors which are thought to influence observable classroom behaviors have been the object of instructional research. Furthermore, Dunkin and Biddle (1974:38) propose the interrelated variables involved in L2 classrooms and a general model for the study of classroom teaching which are primary process valuables within the real "classroom" is outlined as in Figure 6 (adapted from Dunkin and Biddle (1974:38):

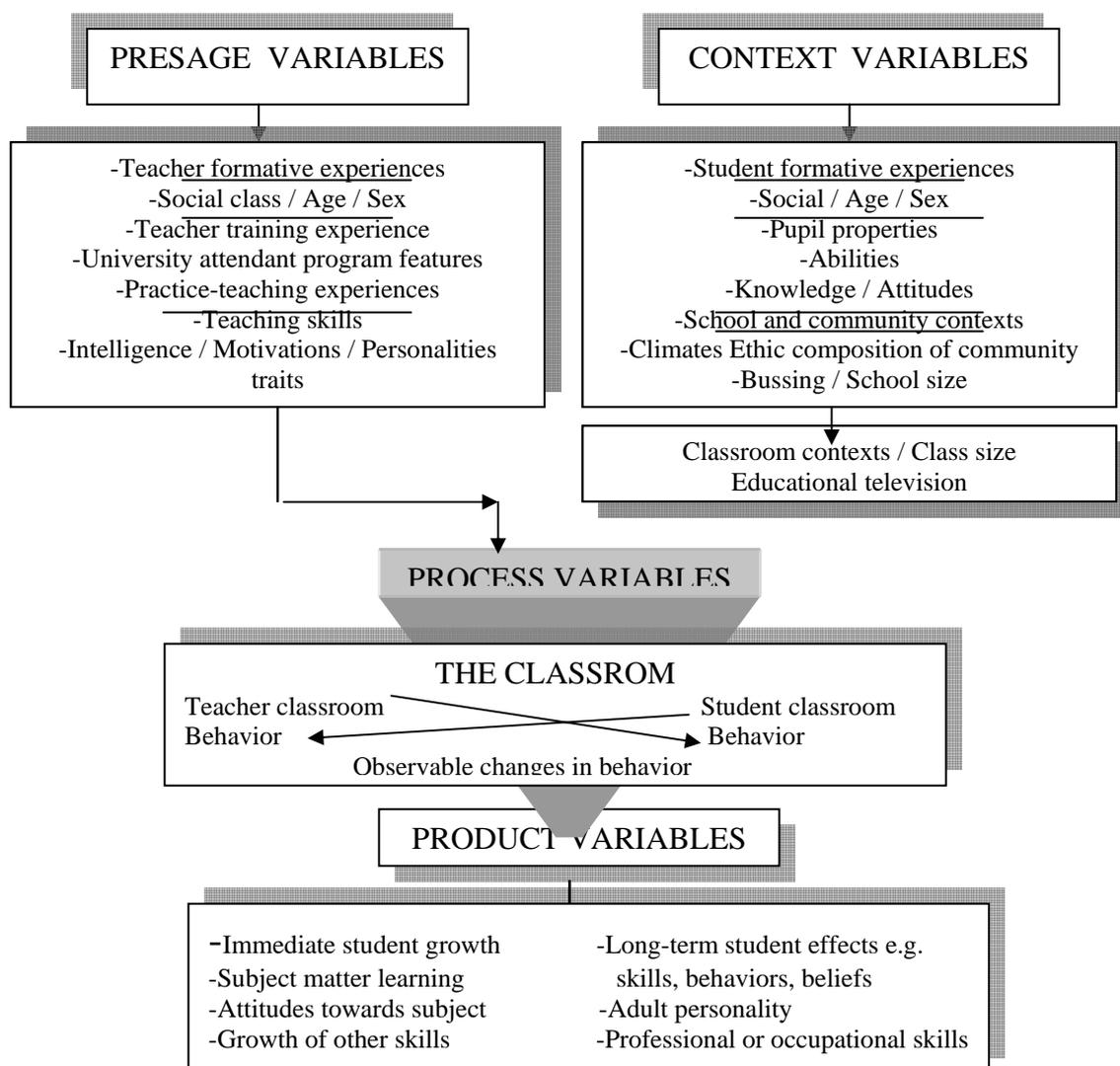


Figure 6: A model for the study of classroom teaching

From the diagram, it can be seen that both presage variables dealing with teacher factor as one of the inputs and context variables concerning with the student factor, school and classroom factors affect the process variables. The latter variables consist of teacher and student interactions that influence the product of educational knowledge skills. Similarly, in L2 classroom, the English language competence occurs and this can affect English language use for professional and occupational goals.

For the classroom context, Chaudron (1988:6-11) introduces issues in L2 classroom research as the following points:

1) Learning from instruction

This point indicates the implication of second language acquisition between the theory to teaching and syllabus construction. A learning task from the syllabus will usually involve: a) the acquisition of certain fundamental units or elements (e.g. words, facts, rules, concepts); b) their integration in functional relationships and application by means of; and c) a certain amount of production, practice, or other mental operations with those elements.

2) Teacher talk

This point refers to L2 teacher speech in usual classroom settings. The area of the research has generally attempted to explore the nature of classroom speech and, especially, to describe and quantify the large number of features of teacher speech. It might be modified as speech rate, syntax, vocabulary, pragmatic functions, and so on referring to effective input in the classroom with respect to their effects on learners' development.

3) Learner behavior

This is slightly broader perspective, which focuses not only students' linguistic behavior but their learning strategies and social interactions with other learners. The research on L2 acquisition has been done basing on the question of what factors (e.g. classroom grouping or tasks) facilitating optimum learning behaviors and the control of students' own learning.

4) Interaction in the classroom

This aspect can influence the classroom on L2 development. The interactive features consist of ways of negotiating comprehensibility and meaning. Especially, non-native speakers' interactive speech can result in simplified TL syntax and

morphology. These issues take a much greater role to attribute the interaction of classroom behaviors, such as turn taking, questioning and answering, negotiating of meaning, and feedback. Interaction is viewed as significant. It is argued in three points: 1) through the interaction of learners to decompose the TL structures and derive meaning from classroom events, 2) interaction of learners' opportunities to incorporate TL structures into their own speech, and 3) the meaningfulness for learners of classroom events of any kind, whether the thought of as interactive or not the extent to the communication jointly constructed between the teacher and learners. Similarly, Nunan (1989:14) proposes the range of elements and issues of the relation of what, how, why and who to deepen the understanding of English language classroom in Table 4:

Questions		Examples
What	Curriculum processes Curriculum components	Planning / Implementing / Assessing / Evaluating Teachers / Learners / Materials / Interactions Roles / Management / Administration / Support (e.g. counseling)
How	Controlled Naturalistic	True experiment / Standardized test / Observation schedules Case study / Observation / Diary / Journal / Interview Field notes
Why	Generalized Localized	'truth' Insight / Self-development
Who	Bureaucrats Professional Support Learners	Government officials Program manager Head teacher / Teacher / Academic Counselors Interpreters / Bilingual aids

Table 4: Key questions in issues of exploring English language classroom

Moreover, Lier (1988:71-89) indicates the subject matter of second -language classroom research in the profession of English language teaching carried out in the classroom covers studying the processes and circumstances of second-language development to identify the phenomena of the learning encouragement in the classroom. The contextual research includes as follows:

1) Interaction approach

The interaction (or social model) occurs in and through participation in speech events, that is, talking to others, or making conversation, is essential. This approach begins with observation, recording and transcription, and description.

2) The linguistic/mental approach

The studies of morpheme acquisition and comparison of stages acquisition between first- and second-language development suggest that there is a natural order relatively impervious to grammatical sequencing in teaching, and this point is to be the creative construction of the learner, or a language acquisition device which is activated when appropriate input is available and certain barriers, notably the 'effective filter' are down. In addition, the research in the universal grammar and cognitive development attempts to account for the stages of the development by distinguishing between core or unmarked rules, and peripherals or marked rules. The findings could help to gear the environment to the learner's developmental process or, at least, avoid even counterproductive emphasis on certain linguistic structures at inappropriate times.

3) Social process

The second-language classroom itself is only one segment of the social world of the learner, and it also only one, though central component of the organized situations that are involved in education and training. The classroom researcher must therefore study the classroom as embodying a specific set of functions and values from the point of view of the learner, and also from the point of view of social institutions at large. Ideals, expectations, and conceptions of the properties that a classroom must possess so that it can be regarded as an ordinary, good classroom,

which has an important role in determining what, will happen. All these influences decide what or how they are done in classrooms and what are not the same as those that happen in other places.

From Lier's (1988) points as presented, it can be concluded that classroom research (CR) context covers tasks to create an orderly account of the mass of data, using the analytical techniques available in the social sciences. Such techniques include the analysis of social networks, conversational analysis (as a prominent application of ethnographic method), analysis of linguistic variation, and the use of rating scales to measure attitudes. Most techniques are used in descriptive and analytical ethnography that involve the use of intuitive judgements and decisions.

2.4.3 The methods of classroom research

Lier (1988:68-70) suggests the methods of classroom research included three sets of grounds for conducting. They are scientific, linguistic and pedagogical methods, which directly aim to improve a condition or solve a problem. The grounds of classroom research are to help the research focus, strengthen or test theories in order to improve the issues involved in the research field. Those methods contain:

a) Observation

This method can be adopted in many different ways, and a crucial distinction is drawn between evaluation and descriptive observations. An evaluation is often judged as difficult to adapt to research because classroom research mainly involves in the establishment of formal criteria and categories for the classification of classroom events, or the development of a model of discourse structure. Though, it may shed some light on the structure of interaction, it does not lead to a description of what participants in classrooms actually do.

both a great diversity of research questions and purposes, and a range of theoretical perspectives on the conduct of research. In general, these approaches have followed methods adopted by researchers in native English language schooling or other sociological and sociolinguistic studies of communicative interaction. But in L2 classrooms communication between teachers and L2 learners becomes a particularly important issue, so L2 methodology has had to evolve new concepts, instruments, and procedures to adequately describe and analyze interaction. Four traditions in research are raised for L2 classroom research. The study of L2 classrooms has arisen through the influence of researchers from different disciplines (education, sociology, psychology, linguistics and applied linguistics). Research developments in each of these areas have separately contributed to procedures for investigation. They are discussed as follows:

1) Psychometric approach

This was applied in early evaluations of L2 instruction, which was followed as much as possible through standard educational psychometric procedures, with comparison treatment groups and measurement of outcomes on proficiency tests. These contexts- and presage-product studies have been followed by process product studies in this tradition model, which investigated the quantitative relationships between various classroom activities or behaviors and English language achievement.

2) Interaction analysis

This approach was developed when the influence of sociological investigations of group processes had led to the development of systems for the observation and analysis of classroom interaction in terms of social meanings and an inferred classroom climate ('direct or indirect': Flanders, 1960). This L1 educational

research inspired some researchers to adapt such systems and analytical approaches to the L2 classroom. Inherent in this approach was first, an interest in the nature of the dependency of student behaviors on the atmosphere and interaction endangered by the teacher. Second, researchers in this approach had not pursued quantitative analyses, although measurement of the frequency of specific behaviors implied a quantitative focus.

3) Discourse analysis

This approach was arisen from a linguistic perspective, an attempt to analyze the discourse of classroom interaction in structural-functional linguistic terms (rather than inferred social meanings). This approach adopted for L2 classroom and its analytical system includes not only a dimension for pedagogical function, but also dimensions for content, speaker, and others. This approach has the potential of being applied in a quantitative fashion, and its development has largely been confined to different researchers' redefining the proper categories used to describe discourse.

4) Ethnographic approach

This was arisen from sociological and anthropological approaches. It attempts to interrupt behaviors from the perspective of participants' different understandings rather than from the observer's or analyst' supposedly 'objective' analysis. This almost strictly qualitative approach is represented in L2 (bilingual) classroom studies. However, each of these four approaches has been elaborated upon or modified by L2 researcher, often with combinations of them being adopted for particular studies. A comparison between different research traditions, issues and methods in the English language classroom can be concluded in Table 5:

Tradition	Typical issues	Methods
Psychometric	English language gain from different methods, materials and methods	Experimental method – pre- and post-test tests with experimental and control groups
Interaction analysis	Extent to which learner behavior is a function of teacher-determined interaction	Coding classroom interaction in terms of various observation systems and schedules
Discourse analysis	Analysis of classroom discourse in linguistic terms	Study classroom transcripts and assign utterances to predetermined categories
Ethnographic	Obtain insights into the classroom as a 'cultural' system	Naturalistic 'uncontrolled' observation and description

Table 5: A comparison between different research traditions, issues and methods

On the grounds of four earlier approaches, the survey of L2 classroom research inevitably depends on quantitative and qualitative approaches, and classroom observation and instrumentation are to explain adequately the processes and products of classroom interaction. Teachers 'and learners' speeches have been analyzed in quantitative terms. They can be exemplified as words or clauses per T-unit, words per turn, proposition of turns taken, propositions of types of questions, frequency of comprehension checks and repetitions, types or repair, and so on, all with regard to their influence on the process or product of interaction. These analyses have inevitably raised further questions of descriptive and explanatory power, which cannot be resolved on the basis of current research, but which instead requires the development of more comprehensive models or a theory of classroom interaction and its effect on learning.

Moreover, Nunan's (1989:17-18) points of view on understanding English language classroom can be outlined as follows:

1) Teacher behaviors

This aspect looks, in particular, at teacher question, explanations, speech modifications and treatment of error. Using a five-stage procedure as follows can accommodate teachers' methods of investigation areas and issues:

- Stage 1** Collect data, e.g. samples of classroom language for transcription, analysis and study;
- Stage 2** Study the data and see what issues emerge;
- Stage 3** Identify an issue and formulate it as a question or problem;
- Stage 4** Identify the methods and techniques most likely to give you the answers you are seeking; and
- Stage 5** Carry out the investigation.

Additionally, the results of a survey from those areas and issues can nominate a group of classroom language teachers to investigate in their own classroom. They include range of issues to be investigated which show the sorts of things which at least one group of teachers thought worthy of investigation. They are of interest because they are nominated at the end of workshop in which teachers analyze data from their own classrooms, and therefore give some ideas of the deficiencies or problems teachers noted in their own classrooms. Those areas and issues adapted from Nunan's (1989) are shown below in Table 6:

Area	Issues
Methodology	<ul style="list-style-type: none"> -Task analysis and different demands that tasks create -What materials/methods learners do/do not respond to -The learning and teaching of vocabulary
Classroom management and interaction	<ul style="list-style-type: none"> -The occurrence of digressions within a lesson by teachers and students and the extent to which these lead to useful learning outcomes or simply distract, confuse or mislead students -The management of classroom interactions -Effective and ineffective instruction giving -How to increase student talking time. -Do students think this is valuable? Does it enhance learning?
Professional development and self-evaluation	<ul style="list-style-type: none"> -How do teachers perceive peer analysis? -In what ways is it helpful, threatening, inhabiting? -How action research can improve cohesion/sense of progression from the students' perspective -Peer teaching/learning for teachers -Promoting personal responsibility for professional development -Using classroom analysis with new teachers to

Area	Issues
	assist them develop their own practices more effectively
Applying skills	-Encoding and monitoring students' use of – English outside the classroom
Affective factors	-Students' attitudes towards games and drama activities -Student perceptions of English language learning
Assessment and evaluation	-Evaluating the effectiveness of teaching -Methods of post-learning arrangement assessment -How to develop classroom tests for end-of-course assessment
Acquisition	-Whether plateaus in English language learning really exist

Table 6: Areas and issues nominated by teachers as worth investigating

According to the Table above, Nunan (1989:18) implies that teacher behaviors in teaching investigated in English language classroom could be applied to Chaundon's (1988) four research traditions. However, areas and issues of investigations should be appropriately considered to the methods that could be practical for English language classroom improvement. In addition, teacher perspective in teacher education or development is also taken into consideration to investigate learners' acquisition.

2) Learner behaviors

Beyond teacher behavior, Nunan (1989) additionally proposes the aspect of learner behavior for classroom investigation. It states that since the principal reason for having English language classroom is to facilitate English language learning, it is obvious that learner behavior is extremely important. Here the concentrations focus on aspects of learner behavior which teachers can study and thereby enrich and extend the understanding of the English language classroom. Obviously, there are some aspects of learner behavior that are not feasible for teachers to investigate fully, and teachers do not spend a great deal of time considering these. In selecting issues, the

guideline by the fact that teacher's principal focus is on reflection, research-based teaching, and not simply on grafting classroom onto current practices. The subsequent details in Table 7 adapted from Nunan (1989) illustrates the nature of second-language development, the learner and classroom tasks, and learning strategies, which might be investigated in the classroom.

Issues	Sample investigative question
Learner language development features	-In my teaching, I generally provide an application task to follow up a formal presentation. -Which language items do learners actually use in the application task? -Do learners learn closed class items (e.g. pronouns demonstratives) when these are presented as paradigms, or when they are taught separately over a period of time?
Learner language interaction	-In what ways do turn taking and topic management vary with variations in the size and composition of learner groups? -Are learners more effective at conversational management when techniques such as holding the floor, bringing in another speaker, etc., are
Issues	Sample investigative question
	consciously taught?
Tasks	-Which tasks stimulate the most interaction? -Which tasks work best with mixed-ability groups?
Strategies	-Is there a conflict between the classroom activities I favor and those learners prefer? -Do my best learners share certain strategy preferences, which distinguish them from less efficient learners?

Table 7: The nature of second language development, learner and classroom tasks

To sum up, the above discussion indicates that learner factor plays an important role in the classroom research for second-language learning. Particularly, the major point focuses on developmental aspects of learner language, learner interaction in the classroom, communicative tasks and the language they promote, and learners' strategies.

3) Collecting data

Nunan (1989) suggests that it outlines methods, which are basically qualitative in nature. A wide range of methods consists of using diaries, journals, field notes, questionnaires, interviews, case studies, and protocol analysis. These techniques employ investigating English language learning and teaching. All those techniques are conclusively indicated as follows:

a) Diary studies

Journals, diaries and field notes become increasing popular as tools for gathering information about teaching and learning. These three terms interchange and cover a first person account of a teacher experience, which are documented through regular entries in a personal journal and then analyzed for recurring patterns or salient events. They are employed to monitor either the learning process or teaching process or both.

b) Interviews

Collecting information from learners (and teachers) through various forms of interview is a commonly used for the methods of ethnographic and quantitative research. Interviews can be relatively structured or unstructured. A structured interview is conducted around a set of predetermined questions; whereas, an unstructured interview is more like a free-flowing conversation between the interviewer and interviewee. Structured interviews can also be combined with other data-collection techniques, such as formal questionnaires. It can be used to investigate a range of issues including developmental aspects of learner language and learning-style preferences.

c) Questionnaires and checklists

Questionnaires and checklists come in many shapes and forms, and can be utilized to investigate practically any aspect of teaching or learning process. They can provide a great deal of information in an economical form. Data provided are also adopted to various forms of quantification. For example, teachers can compare percentages and frequencies of responses from different learners much more readily from questionnaire data from the sorts of free-form responses obtained in unstructured interviews. The problems include having developed our categories and questions before collecting the data. Teachers may predetermine a large extension, what we actually find. Another problem (and one, which is not restricted only to questionnaires) is that of trying to obtain information in the target language from low-proficiency learners. If one is working with such learners, it is advisable to have one's questionnaire translated, or obtain bilingual assistance during the data-collection phase.

d) Protocol analysis and stimulated recall

Protocol analysis and stimulated recall are designed to get teachers to reflect their teaching in order to make conclusions and generalizations which goes on in their classrooms. This line of research is predicted on the assumption that what teachers do in class, the judgements and decisions they make, and is affected by their beliefs and attitudes about the nature of language and language learning. In stimulated recall, teachers listen to an audiotape or view of videotape of their teaching and describe what they are doing and why. This can be set as a running commentary parallel to a transcript of the lesson.

e) Case studies

A case study is an account of a single instance of whatever teachers investigate. Teachers can thus have case studies of a single teacher, a single learner or a single school. Case studies can utilize any of the methods as well as those related to direct classroom observation. The status of data yielded by case studies, researchers who take a quantitative approach to research question can be generalized from the research results in a single instance.

4) Classroom observation

Certainly, if teachers want to enrich our understanding, we need to spend time looking in classrooms. Given the fact that classrooms are specifically constituted for the purposes of bringing about learning, it would be surprising if this were not the case. The classroom is 'where the action is' and teachers shall now look at ways of recording and investigating that action. A great deal has been said and written about classroom observation, and teachers shall be able to touch on selected aspects of an intensively interesting area of investigation which has generated a range of methods and techniques. Here, some brief guidelines of each technique are proposed:

a) Basic orientations

It is important to realize from the outset those teachers' preconceptions about what goes on in the classroom will determine what they see. It is extremely difficult to go into the classroom and simply observe what there is in an objective way without bringing to the observation prior attitudes and beliefs. Different players in the classroom drama will also have different views and interpretations of a given lesson or piece of interaction. The tools and techniques which teachers use to help us document classroom interactions will also strongly influence what teachers do and see in the classroom. For example, the tally sheet of a piece of information concerning

interaction can be used. Teachers can conclude the information from the tally sheet and infer to what is going on in the classroom they investigate.

b) Observation schemes

Before teachers can identify the particular observational tool they are going to use, it is desirable to think about what we want to look for or at. If possible we should clarify the nature of the problem or issue we wish to investigate. This should be formulated as precisely as possible as an investigative question. The observation helps teachers find answers to their questions or resolve their problems. The point teachers look at should be relevant characteristics of the setting, including space and equipment, in which the behavior will be observed, and the constraints imposed by the physical setting, teacher talk or student talk. The following questions adapted from Boehm and Weinberg (1977 in Nunan, 1989:82) can be exemplified:

- What are the physical arrangements of the various components of the setting that might need to be considered?
- What people will be present in the setting?
- What characteristics of the individuals or group being observed need to be considered?
- What is the universe of behaviors that you intend to consider?

c) Classroom ethnographic

One of the problems on the use of observational schedules and schemes is that the various categories comprising the schedules are predetermined by the researchers before they actually go into the classroom to collect their data. Admittedly, the schedules are developed over many painstaking hours, involving a great deal of classroom observation. They also reflect current theoretical perspectives

on the nature of language learning and use. However, there is no denying the fact that teachers predetermine what they should look for, and to the extents are likely to condition what they see.

Lier's schemes (1988:43) based on the fact that those techniques are a great improvement. The questions are whether they actually add to teachers' knowledge and understanding of what goes on in the classroom. They depend on a prior selection of categories, which are determined by ideological beliefs about the nature of learning. They focus on the observable, countable, and, usually, low-inference, behaviors, which they assume that more, equals better basing on the following logical circularity in Table 8 (Lier's, 1988:43):

Procedures	Problems
1. Certain features characterize the 'good' classroom.	What is meant by 'good'? Are these features all equally relevant? Some more than others?
2. These are the features that are relevant.	What is meant by 'relevant'? Who decides? Why?
3. Translate them into categories that are clear and unambiguous.	Is the translation valid? Are all the features translatable? When you reduce ambiguity, what else do you reduce?
4. These are the classroom behaviors that fit into each category.	How well do they fit? Do some fit in more than one category, or in none at all?
5. Add them up	Is more necessarily better?
6. Compare	Answer: Back to procedure 1

Table 8: Procedures and problems on classroom ethnographic

The above discussion and in Table 8 can be alternatively recorded, transcribed and engaged in the close textual analysis of classroom interactions. Moreover, audiotape and videotape as tools, can be selected to record the classroom interaction.

d) The social organization of the classroom

In this section, teachers shall look at some alternative ways of exploring English language classrooms. The social organization of the classroom here, which contributes the observation for ethnographic approach, includes:

1) seating charts

Seating charts provide a diagrammatic representation of the physical arrangement of the classroom and allow the observer to record a range of behaviors, including the amount and type of interaction between different classroom participants.

2) sociograms

Sociometry is used to obtain an indication of the interpersonal dynamics and social structure of a group, which can be a threatening thing for learners, and need to be undertaken with care. It is particularly important that confidentiality be preserved and that the participants in the process are aware of this.

In conclusion, discussions of collecting data including diary studies, interview, questionnaire and checklist, protocol analysis and simulated recall, case studies could be methods of practical classroom research. However, the teacher as researcher might apply in different situations based on the knowledge skills and nature of classrooms and learners. Also, basic orientation, observation scheme, classroom ethnographic and the social organization could be justified for some of techniques available for carrying out classroom observation. Teachers can choose appropriate instruments or techniques on what they actually find in the classroom depending on a particular research problem or issue.

2.5 Teacher Research and Professional Development

A major benefit of observational and investigative activities outlined is the provision of a powerful professional development tool. Nunan (1989:97) suggests that the consideration of these activities and ideas be for teachers to apply their own

classroom through their own personal research agenda. To support that idea of classroom techniques, the following outlines focus on the benefits of incorporating a teacher-research component into professional development programs for in-service workshops for introducing teachers to the concept and for providing them with the basic skills and techniques for establishing their own research projects. The subsequent aspects are discussed as follows:

2.5.1 A rationale for teacher-research

The growing interests in classroom-oriented research and indications to carry out their own research are signs of maturity within the language-teaching profession. They mark a departure from the 'follow the right method' approach with its implication that somewhere there is a correct method waiting to be discovered which will work for all learners in all situations and circumstances. For in-service secondary-level, Breen et al. (1989) and Nunan (1989:101-102) suggest that the natural program of the second-language teacher education can be synthesized into five core principles. It also can be conventionally captured by the rubric of 'reflective' teaching.

1) School-based

As far as possible, both pre- and in-service programs should be strongly linked with the communities they serve. In particular that strong bonds be forged and maintained between the university and the schools and other teaching institutions it serves.

2) Experiential

The idea is for theory and principles to be tested out in practice, and for this process to be documented and reported. The developments of the teacher-research

and ethnographic approaches to classroom research have been done a great deal to promote this principled articulation between theories and practices.

3) Problem-centered

This principle is also closely related to the first and second, and is contingent upon them. This suggests that research and teaching be related to the sorts of problems, which exist in real classrooms and learning environments, and that the major thrust to teaching and research be towards the identification and resolution of such problems.

4) Developmental

Programs should recognize that teaching is a complex human undertaking, and that as a result of this, teachers will be at different stages of development. Professional programs should recognize and cater for such differences.

5) Open-ended

As an extension of 4, programs should recognize and cater for lifelong learning and professional renewal.

The above discussion introduces a major change-taking place in teacher-education. This change is reflected in a growing rejection of the notion, which principles for practice should be derived from outside the classroom itself. The profession renewal and development should derive from the close observation and analysis of classrooms by teachers.

2.5.2 Techniques

This section as, Nunan (1989: 103-105) demonstrates how these techniques and procedures can be used from the perspective of the professional

development to encourage the critical reflective approach. Dealing with the case of teacher-researchers, the following techniques are essential:

- 1) Systematic observation and self-monitoring that teachers need an objective record of what they actually do.
- 2) Workshop program for introducing teachers to principles of classroom observation as a preliminary to setting up their own classroom-research projects.
- 3) Diary or journal for documenting teaching and learning similarly used for teacher development

The earlier discussion introduces classroom investigation from the perspective of professional development. The notion of reflective teachers--observing and experimenting in their own classroom, is consonant with current directions in English language teaching away from the importation of ideas from the outside classroom. The theoretical rationale for teacher-researcher is conclusively outlined dealing with in-service training of foreign language teachers. The discussion also implies the perspective of the research framework together with the related studies in the subsequent discussion.

2.5.3 Problems and solutions in doing action research and classroom research

This topic aims to identify the problems and solutions in current practices of both in international and in Thai perspectives. As Nunan's (2001:202) suggestion, the principal problems identified by teachers with whom the author had worked in a number of different contexts include the following: 1) lack of time; 2) lack of expertise; 3) lack of ongoing support; 4) fear of being revealed as an incompetent

teacher and 5) fear of producing a public account of their research for a wider (unknown) audience.

Nunan (2001) also notes that a number of solutions to the problems assumed owns the opportunity for an action research agenda to succeed are maximized under the following conditions: 1) There is someone 'on the ground' level to 'own' the project; 2) One or more individuals with training in research methods are available; 3) 'on tap' to provide assistance and support to teachers; 4) Teachers are given paid release time for face-to-face teaching during the course of their action research; 5) Collaborative focus teams are established so that teachers involved in similar areas of inquiry can support one another; and 6) Teachers are given adequate training in methods and techniques for identifying issues, collecting data, analyzing and interpreting data, and presenting the outcomes of their research.

Similarly, in Thai Education settings, as the research findings of Chalardyam (2001) suggested from the 1987 National Seminar of the National Primary Education Committee Office, Jamornmarn (1994), and Suwattana (1997) revealed problems and resolutions on carrying out classroom research and the problems and causes are summarized as follows:

1) Selection of research topics because of unclear problems stated and not understanding of research objectives for classroom development.

2) Writing research project due to lack of information, documentation, knowledge and research exemplification for research preparation.

3) Research methods according to lack of research consultants and insufficient knowledge to carry out the classroom research.

4) Data analysis covering knowledge of statistical knowledge and the

selection of statistical analysis.

5) Writing research report and implication consisting of academic sources, consultants, timing, research examples, budget, and implication for teaching purposes, and self-confidence in research knowledge.

In addition, research resolutions and supports suggested by Ueng-sakool (2003) and the National education policy according to the promulgation of a National Education Act by Office of the National Education Commission (2002), the following aspects are concerned with:

1) Educational institutions shall develop effective learning processes, and encourage instructors to carry out research for developing suitable learning for learners at different levels of education institutions, so administrators promote teachers to establish the research projects so, they should outline regulations, money support, material support, facilitation in school, academic resources, and follow-up for the policy of the research projects of school teachers.

2) Teachers follow three new regulations in the National Education Act 2001: 1) research and development for learners' improvements, especially in classrooms are teachers' responsibilities, 2) classroom action research, a research for problem solving in classroom, and 3) a case study for problem solving of learners' psychological factors. Nevertheless, according to the problems of the classroom research stated earlier, the first point of teacher's regulations has not still reach the target of the policy.

Two earlier guidelines stated are institutions and administration's duties to support teacher research. They could lead teachers to professional development according to the regulations in the new era of educational reform. Besides, the new

trends of educational development aims to base on teachers' abilities in classroom improvement in terms of academic, social and environment settings. The major supports for enhancing classroom research depend on the national policy and school administrators. Hence, the fulfillment of teachers' classroom research is the part of educational development, especially, EFL classrooms.

2.6 Reflective Model and the Mode of Teacher Education Courses

Training foreign language teachers, Wallace (1991) introduces this program for in-service training and also indicates how to modify the process of professional development. Relating theory and practice, the reflective model contains two stages introduced as follows:

A) Stage 1: The pre-training stage, i.e. the stage which the person who has decided to undertake professional training or the development before the beginning of that process. The 'trainee' may be pre-service or may already be engaged in the profession of in-service or self-development. This stage deliberately aims to:

- 1) highlight the trainees and what they bring to the training or development process,
- 2) emphasize the fact that people seldom enter into professional training situations with blank minds and/or neutral attitudes, and
- 3) focus the trainees' previous knowledge, skills and experiences, attitudes, beliefs and thinking.

B) Stage 2: The stage of professional education or development

This stage comprises two key elements highlighted as 'received knowledge' and 'experiential knowledge'

1) Received knowledge

In this point, the trainee becomes acquainted with the vocabulary of the subject and the matching concepts, research findings, theories and skills that are widely accepted as being part of the necessary intellectual content of the profession. Therefore, currently, it might be accepted that a skilled English language teacher will be able to a reasonable degree of fluency, to organize pair work and group work, to read a simple phonetic transcription, to be familiar with certain grammatical terms and so on.

2) Experiential knowledge

Here, the trainee will have developed knowledge-in-action by practice of the profession, and will have had; moreover, the opportunity to reflect on that knowledge in action. It is also possible to develop experiential knowledge by the observation of practice, although this 'knowledge-by-observation' is clearly of a different order from 'knowledge-in-action'.

Therefore, an alternative model for teacher education will be called the 'reflective model' that may be summarized in Figure 8 (Wallace, 1991):

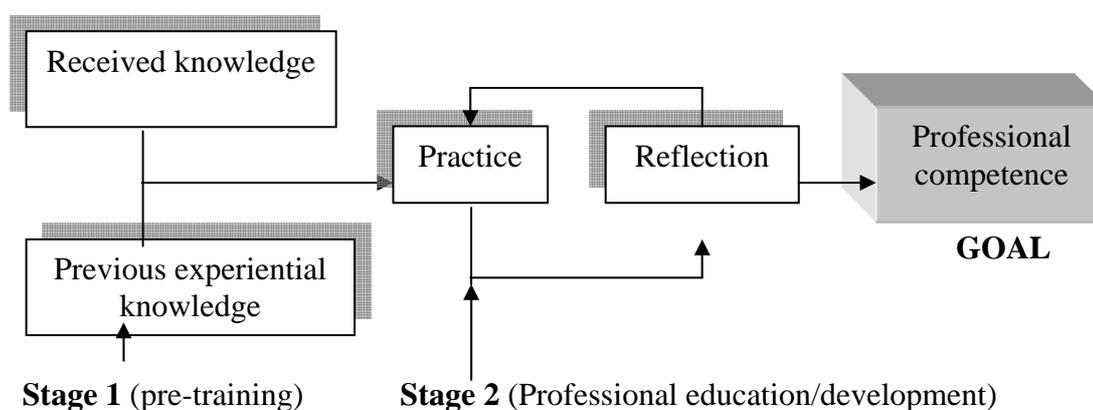


Figure 8: The reflective model for training EFL teachers

C) Goal: Professional competence

The term 'professional competence' is the terminal point of the training course. The complete program of professional education and development expects as the following points:

- 1) organization development including: a) society's expectations , b) the nature of the subject, c) the examination system, d) the school curriculum, e) methodology, f) the teacher's own interest, g) the teacher's changing and deepening insights into the nature of the profession and h) changes in responsibility,
- 2) ways of measuring the competence of one's own practice (self-evaluation),
- 3) techniques of looking at one's practice as objectively as possible,
- 4) techniques of using sources of self-improvement.

The above discussion indicates that second language teacher education covers English language skills and teaching procedures based on teachers' knowledge and experiences. However, the learner's perspective demonstrates that teachers as trainees have to practice what they preach. In professional education, learning styles which show how different people have different attitudes to learning and their own individual ways of learning should be integrated to be taking consideration. Learning strategies and study skills, which control over which style of learning they use in particular situations, imply the need for a corresponding variety of teaching strategies and reflect on their learning strategies in a variety of learning tasks. On this reflective basis, they can be introduced to other strategies and specific techniques, which will extend their learning experiences. In this study, actual practices of the reflective model procedures will be integrated in the developed curriculum of English language classroom research in phase 3- developing the model.

2.7 Related Studies

This section discusses related studies in various points of professional development, ELT problems specifically in classroom research. Moreover, teachers' practices in English language classroom and curriculum development in SLTE are discussed. They are intended to be the research framework of the present investigation as the subsequent sub headlines:

2.7.1 Professional development and classroom research for learning improvement

This part for the review of related literature includes the studies of professional development conducted in both foreign and Thai education settings and classroom research for learning improvement as the following brief discussion:

Honma and Wiltshier (1999, online) investigated action research as semi-scripted monologues in team teaching and found out that the finding was very encouraging and showed that semi-scripted speeches can be linked to the textbook and appropriate tasks. Teachers also found out that new style beneficial to both students and teachers themselves. Action research conducted contributed more positively in the classroom.

Besides, Burns (1997) studied the professional development, which aimed to 1) develop teachers' skills in meeting the learning needs of disparate learner group, and 2) at the same time, to give teachers opportunities to reflect critically and systematically on their own classroom practices in new directions. The project found

out that collaborative action research could help teachers into questioning all their teaching values. Participants could justify theoretical ELT principles underlying teaching practice. The course of the project became the most interesting and challenging.

Moreover, in Thai education settings, Brudhipapa and Trikosol (1995) investigated in-service English language teacher education in the age of globalization: a new model for Thailand to construct a model of an INSET program for EIL teachers. The results from the survey revealed that INSET program for Thai teachers of English language development, TEIL methodology, applied linguistics, English language testing, and language and culture should be integrated into both components wherever relevant. The study also indicated that the INSET program for EIL teachers had to put great emphasis on actual problems that teachers encountered in classroom teaching, through the process of critical reflection.

Besides, the study on the effects of classroom research both in professional education and students' classroom improvement for learning achievement are discussed. Burton (1994) investigated classroom research through classroom research in a workshop project and it was found that combining research and teaching is, indeed hectic because of a great deal of activities and tasks to be responsible for in training a training project. Nevertheless, the researcher decision to treat the workshop as action research on her own teaching had confronted her with many dilemmas of the learner-centered needs based curriculum. The results of the project reflected that how teachers can ensure that the curriculum in action is genuinely responsive to learners' English language learning needs, and how teachers can be as teachers function

effectively as researchers and learners in our own classrooms in ways which improve English language learning outcomes. The workshop project had achieved for the teachers--and their learners, to some extent--and for the teacher-trainer. At the end, it had set the trainers off on a joint learning process.

In addition, Hammond (1994) reported on the issues and decisions involved in choosing appropriate research methodology and analytic tools for a large-scale study of English language interaction in classrooms. It investigated the nature of literacy--in particular the ways in which literacy is constructed in and through the shared classroom talk that take place between teacher and students during literacy lessons. Decisions in regard to data collection were in part shaped by the broadly ethnographic approach. Outcomes from analysis of thematic patterns were found that thematic analysis of whole lessons provided evidence of both similarities and differences in overall thematic patterns. It appeared that similar linguistic resources were employed in the classroom talk of the programs. A major difference between programs lay in what students were taught regarding sources of information for writing. This emerged both through thematic patterns of 'doing literacy' and of 'content'. A related aspect of what students were taught regarding sources of information was the role of reading in the two lessons. In the second lesson, reading appeared to play a central role in developing students' literacy abilities. Therefore, researching the English language of classrooms depended on different data collections and working decisions that taken early in the analysis phase and relatively soon after the data collection proved to be crucial importance to ethnographic study.

Besides, Burns (1994) also studied life in the English language classroom from the teachers' perspective. One of the major challenges currently facing the field of English language teaching is the development of how teachers learn to teach and how understandings of the experiences of teaching develop throughout their careers. The study focused on what it was that a teacher focused on thinking about the classroom, and how reflection on classroom experiences and processes contributed to changes in a teacher's thinking about what he or she did in the classroom. The findings highlighted the importance of giving teachers experience in thinking about framing, and conceptualizing the complex classroom data involved in daily encounters and processes. The study also suggested that more traditional 'end-means' models of curriculum planning which were frequently taught in teacher pre- and in-service programs were simplistic, assuming as they did a rather neat and modular sequence of needs identification, objective setting, content selection, and assessment and evaluation. The development of new ways of thinking about classroom processes occurred when the teacher was given opportunities for close engagement with classroom data. This provided a catalyst, which helped her to rethink some of her unconsciously, accepted practices and led to alternative strategies for planning instruction, awareness of some typical patterns of interaction in her classroom, and assumptions about the purposes of classroom tasks.

Hence, the discussion can be summarized that classroom research reflected learning situations and processes and the project provided both in teacher training in actual classrooms. The methods used can be different processes of both quantitative and qualitative for classroom research. Also, the ethnographic tools reflect the

resolutions for problems solving on English language teaching and what goes on in the classroom for appropriate selection of ELT components.

2.7.2 Problems and resolutions for conducting classroom research

This section aims to illustrate problems together with resolutions in brief to generalize the conducting of classroom research, specifically, in local areas of the Thai education settings. Wongdee (1997) studied and found out that teacher- research began from learning and teaching problems in classrooms, and the advantages of research could benefit both in students learning and teacher development. But MeeLuae (1997) implied that teacher capacity for classroom research depended on knowledge of teaching subject and curriculum, being able to analyze students' needs, and teachers' moral of working. Besides, Kumpon-gnam (1997) reported that processes and effects of classroom research affected on teaching behaviors influenced teachers' critical thinking and developing new innovations for teaching and student learning. Additionally, Vihokto (1993) investigated development situations and teaching innovations and found out that teachers' knowledge in terms of classroom research was the main problem owing to lack of training. For research support, Yingnok (2001) studied the teacher-research support of school administrators and revealed that doing classroom research was accepted for teacher promotion, and more support of classroom research facilitation was also accepted to be the main point of improving learning achievement.

While, Rawee (2001) studied needs on improving classroom research competency of primary education, and found that teachers needed much improvement in classroom research, and a training course of classroom research in every aspects of research methodology. Also, administrators should have supported the tasks of

classroom research. Similarly, Chalardyam (2001) reported in the study that the primary schools moderately supported conducting classroom research, while teachers perceived that classroom research was valuable for teaching and learning. Teachers needed more training of classroom research because they have problems on every component of classroom research methods. They also needed a short research workshop for training. Likewise, Piyasan (1996) surveyed research factors affecting conducting research of primary school teachers and found out that administrators support and promotion, encouraging their training of research projects, research resources, and research expertise consultants were also needed for teachers' classroom research.

Finally, Thatthong and Thatthong (2002) investigated teachers' research knowledge and needs for training on classroom research. The findings indicated that all school teachers regardless of types of school, provinces, positions, and experiences of classroom research accepted and perceived that conducting research was difficult, important, necessary and useful to perform at a high level from primary and secondary school teachers. The problems on conducting based on their self-confidence in research knowledge and understanding. For a model of training on classroom research, most teachers wanted three intervals of workshop on training: before, during and after conducting research, which was of a training duration of a three-day workshop within weekdays of school vacations.

2.7.3 Curriculum development and training

This section discusses how previous research in the case studies of INSET (In-Service Education and Training) in English language teacher education and general education. The concept could be a guideline to apply for the research framework:

Roberts (1998, pp.257-258) briefly exemplifies the curriculum development in case studies of INSET as shown in Table 9:

Location	Scheme	Issues
Basque	Diploma in ELT	Part-time upgrading for state-sector primary-school teachers; integration of off-site and on-site experiences
Israel	A self—directed action research project	Secondary-school teachers explore issues of mixed-ability teaching
Australia	A coordinated action research project (AMEP)	Teachers explore issues raised by the introduction of a centralized curriculum; with external support and co-ordination
Latvia	Support of a local INSET framework (PDP)	{art-time tutors support local groups in the context of system wide change
	PAD: materials to develop classroom management skills	On-site development for secondary school teachers; integration of input, discussion and experiment with teacher control over processes of change

Table 9: Case studies of INSET

The case studies suggest that action research projects represent a self-directed teacher development activity, a network of developing new skills which teachers learn in multilevel in nature. Also, they indicate that teacher development is best supported through long-term involvement of support staff; optimal participation by teachers; and the relevance of program concerns. From the point of view of a provider, they

demonstrate the principle that ‘in-service is a process not an event – a behavior, new theories or conceptions and new attitudes.’

In addition, Burton (1997) presents features of English language teachers researching their classroom as a means of personal professional development. In South Australia this was revised and upgraded every four years, which involved training teachers as action researchers within the research framework of a research community. Teachers found the program challenging and ultimately satisfying, largely due to the support structure of training and network groups. This research concluded that incorporation of professional renewal processes in formal classroom research projects is a way of maintaining teacher involvement in research outcomes.

Additionally, the curriculum developments in Thai contexts were conducted. Kocharayasri (2001) investigated the professional development of teachers through participatory integrated instruction approach with three stages. They contained 1) a development of a model for integrated instruction, 2) a feasibility study of the model and 3) the application of the model to the actual practice in a secondary school setting. The samples were two groups consisting of 5 teachers who obtained the professional development model and 103 Mattayomsuksa 1 students in a medium-sized secondary school. The study comprised three steps as follows: 1) a three day training workshop, 2) a 16-week action research for teachers to conduct learning and teaching processes, and 3) follow-up and evaluation of the project. The results revealed that: 1) M.1- teachers participated in the project could achieve their instructional design and actual practices through participatory integrated instruction. 2) The model methods evaluated during the project could enrich teachers’ teaching competencies and students’ learning achievement based on their abilities.

In addition, Maneekosol (1996) conducted research and development of the action research curriculum for the primary school teachers, which applied the individual action research process – planning, acting, evaluation, and re-acting – to use in all steps of curriculum as a spiral model. This project included five steps: 1) the context analysis covering current necessity and issues, problems, trends and learners' needs, 2) the curriculum draft development to state the details of curriculum's component, 3) the evaluation of the curriculum draft, 4) the implementation for an experiment, and 5) the curriculum evaluation. By studying this training project, it could be concluded that this curriculum had been experimented three times. After each step had been completed, the data were taken to re-correct and improve the curriculum until it was adequately valid in content. The results indicated that the subjects had the similar opinions relevant to action research methodology. Thus, learning objectives, contents, activities were adequately appropriate and interesting for the learners. However, the content in Unit 1, 2 and 3 were rather difficult to understand in medium level. After the project experiment of the curriculum, the subjects viewed that they had known the action research and understood its processes and could apply to instructional activities. From the observation session, it was found that the subjects could do all activities presented due to the curriculum. Besides, they did not express any more comments about what they had learnt. Lastly, the research results revealed a suitable action research curriculum for the primary teachers and could be adopted for use.

Eventually, Pusdee (1998) developed the local curriculum of Lanna folk music on the topic of Sung. Somwang (1999) constructed a training curriculum for Thai classical dance teachers at the primary education level. Additionally, Panya (1999)

investigated developing training curriculum on readiness preparation activities for pre-school caretakers. Lastly, Tamakrut (1999) studied the development of the basic Thai dramatic arts instructional package for Primary school teachers. Those research methods were conducted in different steps of situational analysis, development of instructional curriculum, experiment of the curriculum, and evaluation. The research results were found that the subjects could learn, apply for use in actual practice, and had positive opinions on those training curriculums.

In conclusion, the related studies were discussed in four points: 1) professional development has been conducted for learning development for ELT. It enhances teachers' competencies in their actual classroom practices; 2) classroom research facilitates teachers' classroom improvements; however, 3) teachers' capacities on conducting classroom research should be promoted because teachers reported that they were not confident in conducting, lacked knowledge and understanding of components of conducting classroom research; moreover, 4) the curriculum development and training projects were perceived as crucial instruments for educational factors both in general field and especially in ELT. In addition, EL teachers are important facilitators to determine the objectives of TEFL in local Thai setting. Finally, training curriculum for personnel improvement should be incorporated in the school regulations. The present investigation aims to investigate constructing the curriculum on classroom research for in-service EFL teachers in the secondary schools under the jurisdiction of the Office of Educational Area Services, Chaiyaphum Province. The related studies imply educational perspectives of English teachers, so it could be traceable for the present research framework in order to develop research instruments and implications as shown in Figure 8 as follows:

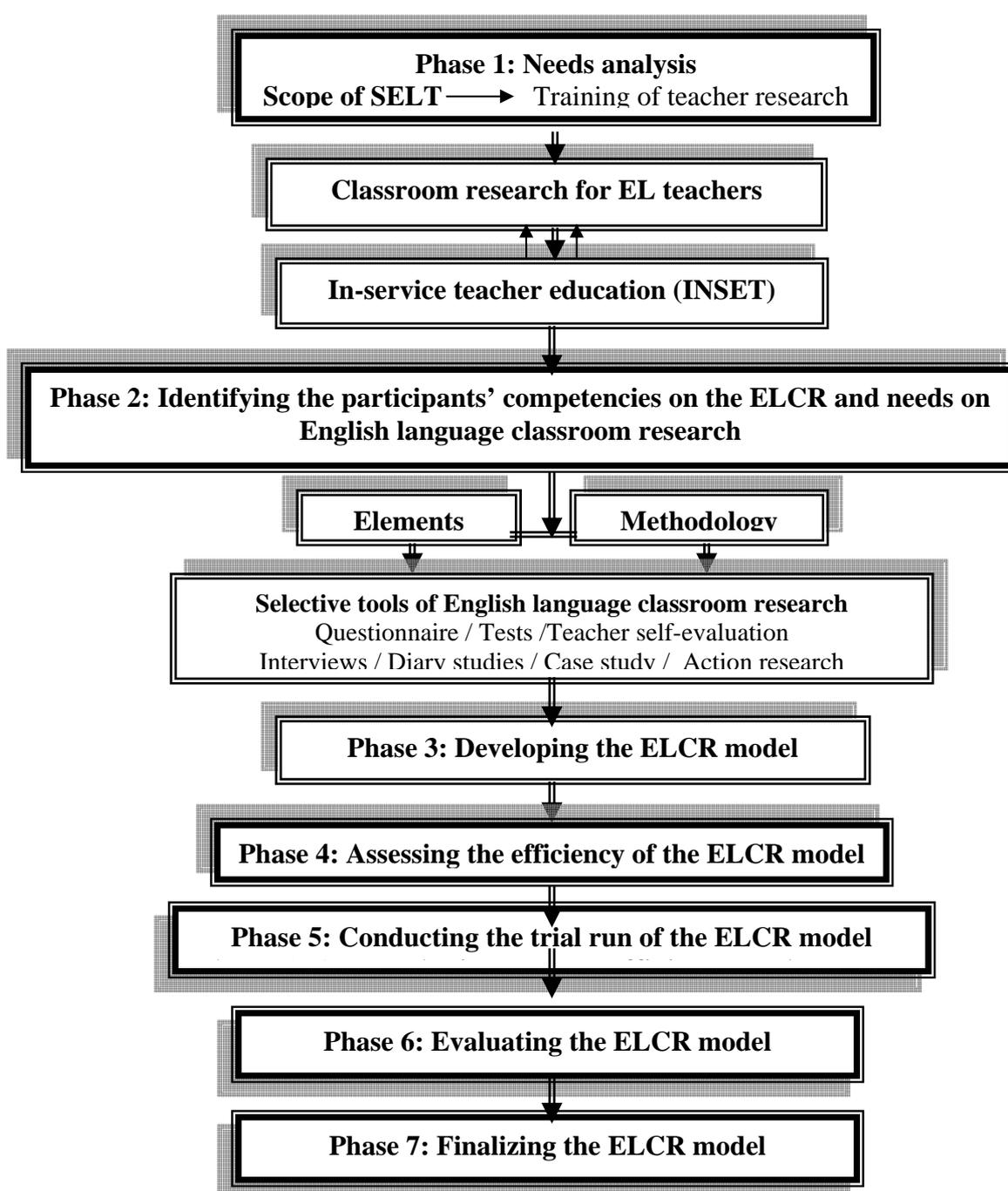


Figure 9: Steps of the development of the ELCR model

CHAPTER 3

RESEARCH METHODOLOGY

This chapter discusses how research methodology was employed for the present investigation which aimed to develop the English language classroom research model for in-service English teachers. The research method was based on the curriculum development for the INSET cycle of second language teacher education. The subsequent topics are presented in each phase as follows: Phase 1: Conducting needs analysis; Phase 2: Identifying the participants' competencies; Phase 3: Developing the English language classroom research model; Phase 4: Assessing the efficiency of the ELCR model; Phase 5: Conducting the trial run of the ELCR model; Phase 6: Evaluating the ELCR model and Phase 7: Finalizing the ELCR model.

In accordance with the phases mentioned above following is a more detailed analogy of each phase:

3.1 Phase 1: Conducting Needs Analysis

This phase aimed to study the needs analysis on a training course for in-service secondary school English teachers in Chaiyaphum Province. It was anticipated to find out the element of the fundamental issue on the second language teacher education (SLTE) basing on Richards' (1998) and the issue on teacher's role and regulations to improve learning process in the 1999 National Education Act. For the expected

results, the researcher would aim to construct a curriculum for in-service teacher development. A brief detail of its procedures concerns:

3.1.1 Purposes of the Study

According to the study, this part of the research aimed to study:

- 1) the needs on training skills of secondary school English teachers for developing an English teacher training course,
- 2) the differences of needs on training skills among different English teachers' educational backgrounds, teaching experiences, and teaching between in lower and upper secondary levels, and
- 3) the needs on training skills for secondary school English teachers from school administrators' needs and opinions.

3.1.2 Population and subjects

The total potential populations were consisted of 250 in-service secondary school English teachers and 65 administrators in Chaiyaphum Province. The actual sample subjects were numbered 109 in-service English teachers selected from the total population. The simple random sampling by a probability technique was based on the computing of the sample size referring to the limited population and the parameter value to study the mean. The statistical calculation was based on the probability of the 0.05 confidence interval, the variance of 1 and the error estimation of 0.142. Lastly, the qualitative data on needs of a training course were derived from a semi-structured interview with 10 administrators equated 15% selected from overall 65 secondary schools. Thus, the overall samples were 119.

3.1.3 Analytical tool development

To measure the needs on a training course of in-service secondary school English teachers, the questionnaire included 3 parts as follows:

- 1) Part 1 included participants' self-reported of sex, educational

background among diploma, bachelor degree, and master degree or higher. Participants' teaching experiences were among 1 – 5 years, 6 – 10 years, 11 – 20 years, 16 – 20 years and over 20 years. The latter one was teaching class levels of lower secondary, upper secondary and both lower and upper secondary levels. The previous self-reports were to be the independent variables of the study.

2) Part 2 consisted of statements for participants' rating allowing five needs levels of the 'most' level, 'much' level, 'moderate' level, 'little' level and the 'least' level as concerns opinions towards the contents of a training course offered secondary school English teachers. Scoring from the responses were 5, 4, 3, 2 and 1 respectively. This part of the questionnaire includes needs on a training course for in-service secondary school English teachers; teaching approaches and instructional practice, teaching skills, communicative skills, subject matter knowledge, pedagogical reasoning skills and decision making, contextual knowledge, and research for language learning development. Each content covered an open-ended question for other training contents. The contents based on Richards' (1998) scope of second language teacher education which were the dependent variables of this study.

3) Part 3 also covered statements of five rating as in Part 2 which included the contents of models, training duration, trainers and open-ended questions to allow English teachers to further express their needs an anticipated training course.

For a qualitative method, a semi-structured in-depth interview approach of data collection was used. The contents were composed of the statements on the practices of classroom research in terms of the importance, problems on English learning and teaching and a training program needed to develop a course design. The further opinions were asked about teaching and learning English as foreign language

learning situations and problems found in schools.

3.1.4 Analytical tool efficiency

To validate the efficiency of the questionnaire, it was conducted as follows:

1) After the questionnaire was constructed basing on the theoretical framework from the review of related literature, the researcher had it checked by the research committee for further correction in the scope of second language teacher training and language use.

2) An additional check of the internal consistency of the questionnaire was made by utilizing 40 respondents, secondary school English teachers in Nakornratchasima Province who were not the part of the study population, and analyzing the results by the Cronbach's Coefficient of statistical technique in the computerized software of the SPSS for Windows. Then the analysis of reliability coefficient alpha revealed 0.8944. As for the statistical technique, this value was believed to predict the variables of needs on a training course at 80%.

3.1.5 Data collection procedures

The data used in this study were composed of two categories as the following:

1) Quantitative data

The questionnaire, which was proved for validity and reliability, was used to collect data. The researcher collected some of the data by himself and had the third-year teacher-students in English program which were supervised by the researcher to collect more data from the samples in the secondary schools in Chaiyaphum Province. The 109 in-service English teachers were requested to fill out a questionnaire and all of them willingly rated the questionnaires.

2) Qualitative data

The semi-structured interview was conducted with 10 school administrators of the secondary schools in Chaiyaphum Province. Each interviewee was interviewed for approximately fifteen minutes about needs on an expected in-service English teacher-training course and other suggestions for English language learning and teacher training. The researcher used a note-taking technique for the data collection and transcribed afterwards.

3.1.6 Data analysis

This section includes the following procedure:

1) A study of reliability of the questionnaire was analyzed by the Coefficient of Cronbach's formula. This method was selected due to its ability to deal well with the five rating scale of the questionnaire. The data analyzed were from those 40 English teachers who were not the subjects of the study. The analysis result of the internal consistency revealed 0.8944.

2) The study samples' information status of sex, educational backgrounds, teaching experiences and teaching class levels were analyzed by the percentages.

3) The data from the questionnaires of identification of needs on an expected training course based on research question No.1 were analyzed by the percentage and determined by selecting the highest frequency and percentage in needs levels of every training content from each domain.

4) Part 3 of the questionnaire (open-ended parts) was qualitatively interpreted by the content related to a training course, which the respondents required.

5) Referring to research question No. 2 that aimed to investigate

differences of needs on training skills among different English teachers' sex, educational background, teaching experience, and teaching class level, the data were analyzed and compared the differences by using the Chi-square (its formula is shown in Appendix 2) for hypothesized testing at the 0.05 significant level.

6) The data from the 10 semi-structured interviews were reviewed and interpreted. Those were translated and summarized in the research report. Overall methods can be concluded as in Figure 10:

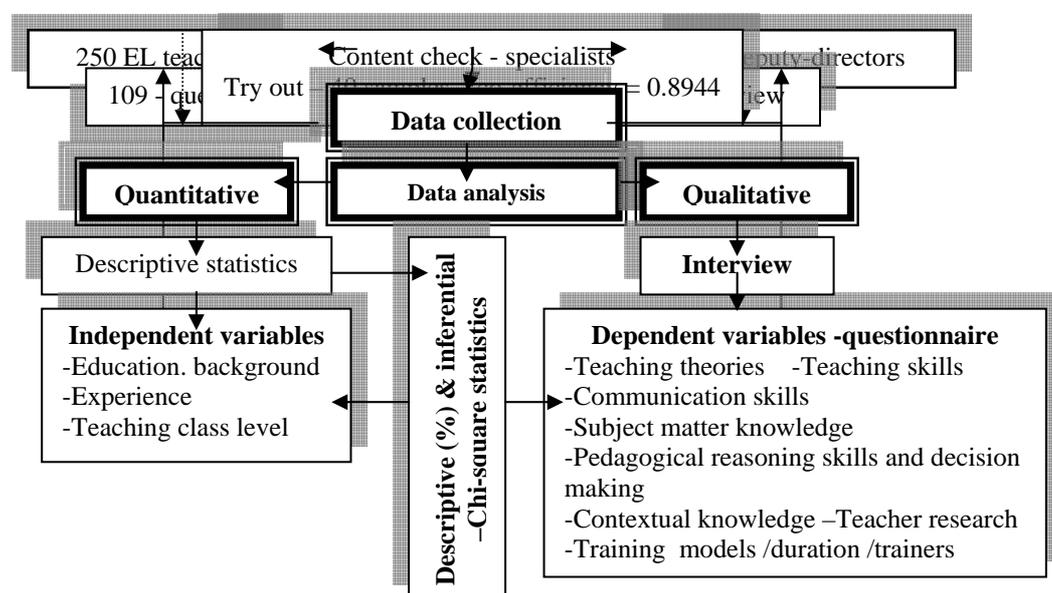


Figure 10: Methods of Research Phase 1

This investigation had reported on the research findings of needs analysis of a training course for in-service English teachers as the objective of the study. In-service English teachers reported needs of the proposed contents of a teacher training course to be helpful for their profession development. In the response to the research questions, the research results of this phase are presented in Chapter 4.

3.2 Phase 2: Identifying the Participants' Competencies

This step proposed to investigate the research results from phase 1 that the

target subjects required the major aspect of classroom research for their professional development. To identify the subjects' competencies on classroom research, the researcher had investigated the study of perceived knowledge – understanding and needs on a training course of English language classroom research for in-service secondary school English teachers. The contents of the study were based on Nunan's (1989), Chaudon's (1988), and Lier's L2 classroom investigation. The results gained were traceable for the curriculum development in the next phase. Each step of the investigation illustrated in this chapter is demonstrated as follows:

3.2.1 Purposes of the study

In accordance with the aims of this phase, the research purposed to:

- 1) study perceived classroom research knowledge and understandings of secondary school English teachers under the jurisdiction of the Educational Service Area, Chaiyaphum Province,
- 2) compare perceived classroom research knowledge and understandings of secondary school English teachers under the jurisdiction of the Educational Service Area, Chaiyaphum Province,
- 3) study needs on training of classroom research and the model of a training course among secondary school English teachers under the jurisdiction of the Educational Service Area, Chaiyaphum Province,
- 4) compare needs on training of classroom research and the model of a training course among secondary school English teachers under the jurisdiction of the Office of Educational Service Area, Chaiyaphum Province, and
- 5) propose an appropriate model of training on classroom research raised on a group discussion technique and the semi-structured interview from the

deputy-directors of the Academic Division in the secondary schools under the jurisdiction of the Office of Educational Service Area, Chaiyaphum Province.

3.2.2 Population and subjects

The population and subjects here are referred to three groups as follows:

1.1) Secondary school English teachers from both the secondary schools under the jurisdiction of the former General Education Department and National Primary Education Committee Office. Currently, the two groups of EFL teachers are under the same jurisdiction of the Basic Education Committee Office Area, Chaiyaphum Province. The numbers of teachers from the first group were 267, and from the latter 156, so the overall populations were 423 teachers for answering the questionnaires. The subjects were derived from a simple random sampling technique covering overall secondary schools in Chaiyaphum Province, which were calculated by using the statistical probability technique (Kaimook, 2002). Basing on the 0.05 confidence interval, variance of 1 and the error estimation of 0.15, the amount of subjects realized was 122 cases.

1.2) The purposively selected subjects for a group discussion technique were 15 EL teachers from the secondary schools in Chaiyaphum Educational Service Area Office 2. These subjects were used for collecting data from a group discussion on English language classroom research covering advantages, problems, and resolutions.

1.3) Additional subjects aimed to collect data from a semi-structured interview were selected from 15 deputy-school directors responsible for the academic department in the Academic Area of Chaiyaphum Province.

3.3.3 Analytical tool development

Measuring the perceived knowledge - understandings and needs of a training

course on English language classroom research from EL secondary school teachers through a questionnaire comprised three parts:

2.1.1 Quantitative methods

They comprise as follows:

1) Part 1 comprised participants' self-reported of their sex, previous working duration; under 6 years, 6 - 15 years, 16 - 25 years and over, and types of secondary schools from the Basic Education Committee Office. Those schools were under the jurisdiction of the former General Education Department, and the Primary Education Committee Office. The sub-part of participants' previous experiences consisted of the participation of classroom research training for an EFL classroom. The final sub-part included the experiences of conducting EFL classroom research.

2) Part 2 included sub-parts of questions allowing five levels of perceived knowledge - understandings and needs concerning a training course included the 'most', 'much', 'moderate', 'little', and the 'least' levels of the subjects' opinions towards EFL classroom research. Scoring from the responses were "5, 4, 3, 2, and 1 respectively. This part of the questionnaire included elements, processes, collecting data, data analysis, data presentation and interpretation, and writing research report of language classroom research.

3) Part 3, final sub-part covered models, training duration, trainers and open-ended questions to allow EL teachers to further express their opinions.

2.1.2 Qualitative methods

They comprise the following aspects:

a) a group discussion technique gathered from 15 EL secondary school teachers and b) a semi-structured interview approach using 15 interviewees

comprising 12 deputy school directors responsible for school Academic Affairs and 3 experts in classroom research. The contents from two approaches covered advantages, problems and resolutions of classroom research that those subjects perceived from their working settings.

3.3.4 Analytical tool efficiency

To validate the instrument efficiency, it was conducted as follows:

1) After constructing the questionnaire based on the theoretical framework derived from review of related literature, the researcher had it verified by the thesis supervisor and then it was rechecked by three specialists. Two of them were keen on statistics and educational research and one from EFL field for further correction in the scope of second-language classroom research and professional education. An additional validation check was also conducted by comparing the subjects' opinions in low-scored and high-scored groups on perceived knowledge - understandings and needs on a training course of language classroom research. The comparison was calculated by a statistical technique using the t-test (its formula is illustrated in Appendix 3). The results of differences from each item were referred as the discrimination of the questionnaire. The original questionnaire comprised 28 items, after it was calculated by the t-test, 22 items could be used for the next step of the survey. However, the content of the questionnaire still covered L2 classroom research methods anticipated for a training course.

2) An additional check of the internal consistency of the questionnaire was conducted by utilizing 50 respondents, EL secondary school teachers that were not included in the subject in this study. They were from the secondary schools in Nakornrajchasi, Khon Kaen, and Chaiyaphum Provinces. The respondents' data of

perceived knowledge - understandings and needs on a training course of English language classroom research were calculated by the Coefficient of Cronbach's statistical technique in the computerized software of the SPSS for windows. Then the reliability-analysis result of coefficient alpha revealed 0.9040 and 0.9266 respectively and in its entirety paper was 0.8810. So, it could be inferred that the possible prediction of variables of perceived knowledge - understanding and needs on a training course of English language classroom research was approximately at 90%.

3.3.5 Data collection procedures

The data used in this study were composed of two categories, so the collection procedures could be identified in two phases as follows:

1) Collecting quantitative data

The questionnaire, which was tested and proved for its validity and reliability, was used to collect data from December 1 to 15, 2003. To have the respondents clearly understand how to answer the questionnaire, the researcher used a Thai version and collected some of the data by himself. Moreover, the second and fourth year student teachers in the English program from Rajabhat Institute Chaiyaphum, who were supervised by the researcher, had collected the others. The 122 in-service teachers were questioned, and they all willingly responded to the questionnaires. Finally, the data was transcribed into English for presenting the research report.

2) Collecting qualitative data

The data gathered were derived from two techniques. They included:

2.1) Group discussion

This technique was used to gain the data from the teachers in

Chaiyaphum Educational Service Area Office 2 as practitioners. They were invited to officially participate in the meeting organized on one of the weekdays at Kaengkrowittaya School, the center of English Teaching and Learning Development. The participants were teachers of English working as usual in the secondary schools. They were asked to discuss on the guidelines to their experiences, problems and resolutions of conducting language classroom research. The meeting lasted one and half-hours. The data was recorded on tape, and then transcribed afterwards.

2.2) A semi-structured interview

This technique was done with 13 deputy-directors responsible for the academic affairs in the secondary schools and 2 specialist administrators in educational classroom research. They were experienced the practical guidelines and the national policy of doing classroom research in school according to the 2002 Basic Curriculum. In school academic affairs, they had some background knowledge of necessities, problems and solutions on conducting classroom research in the secondary schools. The in-depth interview was done from December 12 to 16, 2003, and the data were collected by the note taking and subsequently transcribed for an interpretation.

3.2.6 Data Analysis

This section covers:

1) A study of internal validity of overall details in the questionnaire beyond which specialists' checks, were analyzed from the difference of opinions from the response in low- and high scoring groups by using the t-test.

2) The reliability of the questionnaire, as analyzed by the Coefficient of Cronbach's formula was proven due to its ability to deal well with the five-rating scales of the questionnaire. The data analyzed were derived from 50 EL in-service

teachers, who are not the subjects of the present study. The analysis results of the internal consistency valued 0.9040 and 0.9266 in the parts of perceived knowledge - understandings and needs of training on a classroom research respectively.

3) The study samples' information status of sex, working experiences, types of school, experiences on conducting English language classroom research were presented by the percentages.

4) The data from the questionnaires of perceived knowledge – understandings and needs levels on expected training course based on research question No.1 and 3 were analyzed by the percentage and determined by selecting the highest frequency in each level of "1-the least, 2-least, 3-moderate, 4-much, and 5-the most" and the percentage was also selected and presented from each item.

5) The questionnaire, Part 3 (open-ended part) was qualitatively interpreted, and grouped into which all the contents were used for a training course of language classroom research.

6) To find out the differences of perceived knowledge - understandings and needs on a training course among independent variables. The data was analyzed and compared differences by using the Chi-square for hypothesized testing at the 0.05 significant level.

7) The data from the semi-structured interview, and a group discussion were reviewed, interpreted, translated, and summarized in the research report. Overall procedures are shown in Figure 11:

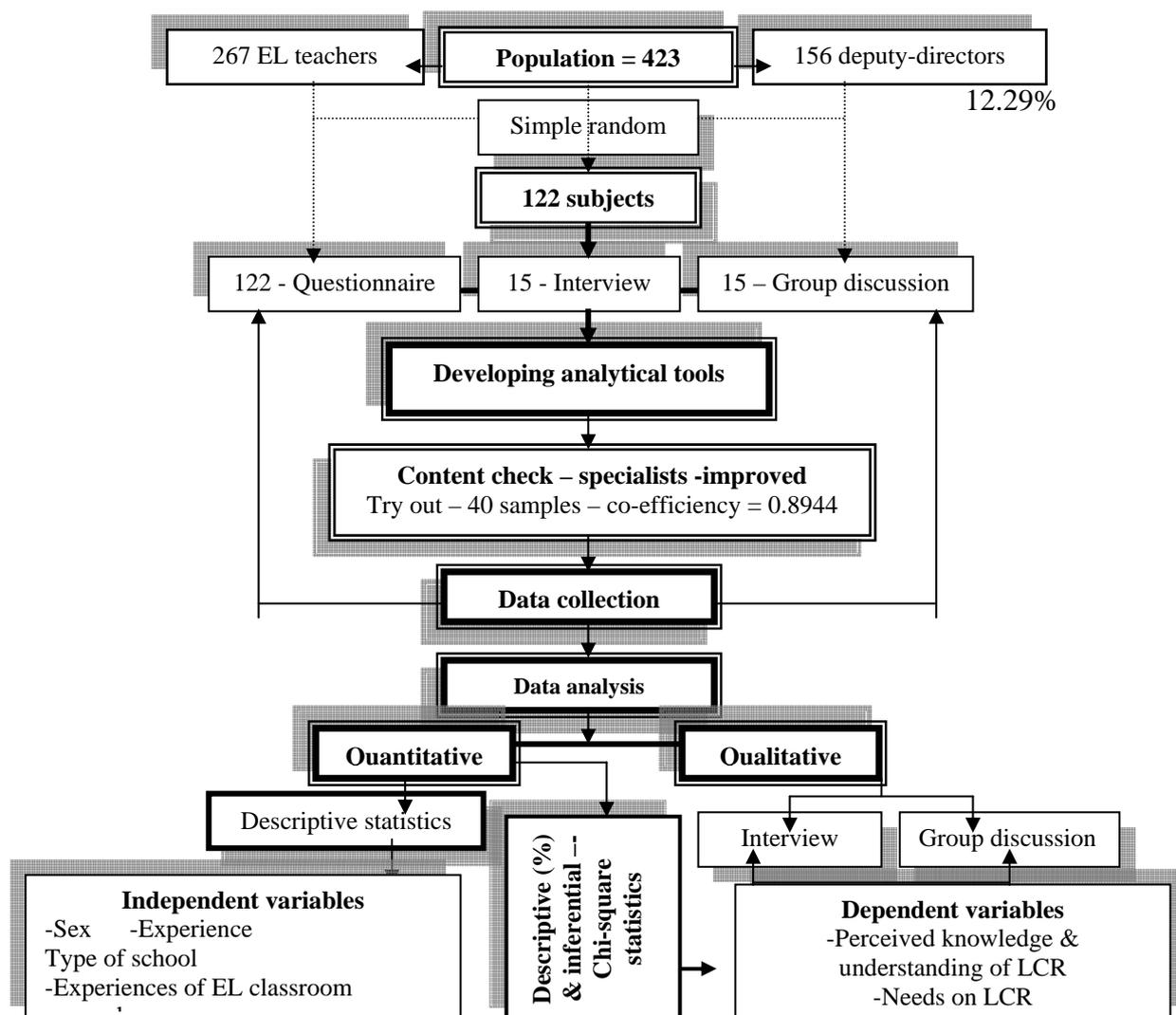


Figure 11: Methods of research Phase 2

3.3 Phase 3: Developing the English language classroom research model

The needs analysis and the study problems and resolutions in the two earlier phases became traceable for the development of the ELCR in this study. This phase was adapted from Roberts' (1998) Richards' (2001) on in-service training and language teaching is guided in two sub-parts, that is to say:

3.3.1 Designing goals and learning outcomes of the ELCR model

In design (planning), the researcher made decisions on the goals and objectives; selection, sequencing, weighing and the integration of the program elements. The purposes of this step were to: 1) provide a clear definition of the purposes of the program, 2) set the guidelines for trainers, trainees, and materials, 3) help provide a focus for instruction, and describe important and realizable changes in training.

3.3.2 Curriculum planning and syllabus design

Based on educational philosophy, previous information, current situations, problems and trends of ELT and research promotion in Thai local area settings, the following dimensions of the development of English language classroom research model in this step were composed of:

- 2.1) a course rationale
- 2.2) issues and aims in classroom research
- 2.3) methods of in-service teachers' development
- 2.4) structure of curriculum model
- 2.5) guidelines for the evaluation of English language classroom research

The content of the English language classroom research model would be the self-development package for training. It includes 8 modules of English language classroom research as follows: 1) Identifying background knowledge; 2) basic elements; 3) review of related literature; 4) innovation development; 5) designing English language classroom research; 6) collecting data; 7) analyzing the data, and 8) reporting, summarizing, and interpreting the results.

Measurement and evaluation sessions were important steps in the curriculum development to assess the first draft of the curriculum. It aimed to prove the elements in terms of relevancy, appropriateness, to recheck and correct for further completion described as follows:

1) Participants

Six specialists assess the content validity of the ELCR model draft. Here, the specialists were divided into two groups of five containing who specialize in 1) classroom research methodology chosen by the degree of education and teaching experiences in the undergraduate and graduate students, and 2) English language teaching the same qualification as in the previous one. The results from the specialists' checks were used to improve the curriculum contents of training and language classroom research.

2) Instruments

An instrument used in this step was analytical form of evaluation for the congruence, content, design, utility and feasibility of the model designed. The specialists used the evaluation form to evaluate every element of the curriculum design, English language classroom research, adapted from Dick, Carey and Carey's (2001) and the language used in developing the curriculum.

3) Analysis

An analysis in this step covered the specialist' opinions, suggestions, and comments from the evaluation form and open-ended part to analyze the value of Index of Objective Congruence: IOC. It was to prove the congruence of the model content so that the results can be the guidelines for more improvement.

3.4 Phase 4: Assessing the efficiency of the English language classroom model

To assess the ELCR model efficiency, this experimental phase is presented as follows:

3.4.1 Subjects for experimental phase

The subjects included: 1) three English teachers for single experimental assessment, 2) 10 English for small group of 2nd experimental assessment and 3) 36 secondary English teachers specifically in the experiment of Phase 4. They were randomized from the populations of 157 teachers working in Chaiyaphum Educational Service Area Office 1, specifically in Muang and Nongbuadang Districts. The subjects in this step were not included in the main project of training. The figures were derived by purposive random technique calculated by the probability estimation from overall population in the stated areas. The probability estimation contained 1.96 reliability level, 2.40 variance value and 0.45 error estimation. The main subjects were 36 teachers. For participating the training workshop, the researcher sent the official letters from the School of English, Institute of Social Technology, Suranaree University of Technology to invite them to take part in this training session. However, the researcher got the official permission from Chaiyaphum Educational Service Area Office 1 before sending the letter to each secondary school under its jurisdiction.

To conduct the experimental phase, the Pre-experimental Design was used for assessing the instruments efficiency mentioned in the procedures of collecting data and data analysis. The design is in the following model (Nunan; 1992):

O 1 X O 2

When O1 represents an evaluation before an experiment, O2 stands for an evaluation after an experiment, and X represents the experimental treatment.

3.4.2 Research instruments

The instruments used to assess the curriculum in this step were composed of the followings:

1) the pre- and post-tests of knowledge and understanding of English language classroom research with 61 items and the test items accompanied after the module.

2) the checklist for opinion assessment covered five-rating scales with the training content difficulty and the subjects' understanding. The number of its items was based on the content of each ELCR module. The rating scale and the interpretation included the levels of "most, much, moderate, little, and the least."

3) the observation form to assess the subjects' behavior during training, and 4) the semi-structured in-depth interview to assess the training process during and after the training project.

To construct the instruments, the researcher analyzed the improved curriculum, which covered the principles, goals, structures, and activity guidelines, and evaluation criterion in order to set up the research framework. The procedures covering a training curriculum of English language classroom research were respectively presented as the following issues:

- 1) the construction principles of each type of instruments,
- 2) the curriculum of the ELCR curriculum based on training objectives,
- 3) the analysis of objectives and proportion of the test items, and the scope of observation and interview,

4) constructing overall 61 items of pre- and post-tests derived from the test items of each ELCR module, the checklist for opinion assessment, the observation form, and the semi-structured interview, and

5) specialists' checks for content validity of every type of the instruments

3.3.3 Procedures of collecting data and data analysis

Except for the content validity of every instrument type, which was proved by the same group of specialists mentioned in the previous steps, the researcher had the subjects take the pre-test before training. The post-test and opinion checklist were used after training activities as described below:

1) The pre- and post-tests for the experimental subjects were proved in terms of the test items and analyzed by using the Analysis Item System (IAS) developed by Kaimook (2002). This process was to find out the quality in terms of the discrimination, difficulties and reliability using the KR-20.

2) Three subjects for single experimental assessment were carried out for one/one model.

3) Ten subjects for small group were carried out for one/one model.

4) 36 subjects for the field experiment were carried out by the process of the Reflective Model for arranging the training workshop.

5) From steps 1, 2 and 3, the data were analyzed by using the efficiency calculation of the criterion based on Brahmawong's (1993) formula of $E1/E2$ for 75/75 criterion.

6) In addition, the checklist for opinion assessment was used after the training session; the data were analyzed for its reliability and internal consistency by the Cronbach's Formula.

7) Finally, the observation form and the semi-structured interview used to assess the results of assessing the efficiency of the ELCR model.

3.3.4 Data analysis

The analysis in this step included the data from the experimental phase of the instruments used in the actual phase of the English language classroom research model for in-service English teachers as the objectives stated in the present investigation. The method of analysis comprises:

1) The test-items were analyzed by the Item Analysis System to find out the quality in terms of the discrimination (r), the difficulty (p) and the internal consistency of the test.

2) The E1/E2 model analyzes the data from experimental assessment from the single, small group, and field experiments. The assessment procedure was to compare the difference scores from the pre-test, the assignments during training and the post-test scores of knowledge and understanding of language classroom research, the t-test for two related samples is used.

3) In addition, the scores of opinion assessment after the training session, the level of rating scale was interpreted..

4) The data from the observation form and semi-structured interview during and after the training sessions were interpreted and described to explain for the project assessment.

Overall of the instruments and the formula of the statistical techniques are shown in Appendix 4. After the procedures mentioned above, the researcher had earlier instruments supplement in order to take them for the trial of the ELCR model in the actual training session.

3.5 Phase 5: Conducting the trial run of the ELCR model

The outcomes from the previous phase in terms of the ELCR curriculum, activities, procedures and instruments were supplemented, and then implemented for the goals of the ELCR model. In this phase, the researcher organized the trial of the developed ELCR model by organizing the training workshop to find out its efficiency. The procedures are discussed as the following aspects:

1) Subjects

As stated earlier in this chapter, the subjects contained 54 secondary English teachers. They were selected systematically by the statistical probability technique basing on the 0.05 confidence interval, variance of 2.45 and an error estimation of 0.34 from the population of 166 teachers working under the jurisdiction of Chaiyaphum Educational Service Area Office 2 in 2005 Academic Year.

2) Research instruments

The instruments used in the actual conduct of the training course in the present study consisted of the followings:

- 1) content of English language classroom research including training activities, handouts and exercises for the participants,
- 2) pre- and post-tests of knowledge and understanding of classroom research,
- 3) questionnaire of opinion assessment to evaluate before and after the training activities of ELCR model,
- 4) observation form for the researcher to observe and take note on what and how trainers act before, during and after the training activities,

5) semi-structured interview to assess the processes of training sessions.

3) Data collection

In this step, the researcher implemented the ELCR model developed and supplemented from the experimental phase as in the subsequent steps:

1) studied the ELCR model developed containing trainer's manual, materials, and participants' handouts of training activities.

2) contacted the ERIC Center in Kaengkrowittaya School, Chaiyaphum Educational Service Area Office 2 and sent its letter to inform the subjects to participate the training workshop.

3) Organizing the training sessions within 2 days. One of the specialists on classroom research was invited to give the lecture on the background of the research. The researcher also asked for one assistant whose background was based on English language research or English classroom research for conducting the training project. The researcher worked as the trainer and evaluator until the training project became completed. On this training session, the reflective model of training for in-service professionals was adopted. The procedure details were integrated in the ELCR model for the training workshop of Phases 4 and 5.

4) Data analysis

The data gained during the training session were analyzed as the followings:

1) The score differences of pre- and post-tests before and after the training sessions on English language classroom research were analyzed by using the t-test.

2) The scores of opinion assessment after the training session were also analyzed and interpreted.

3) The data from the semi-structured interview and the observation form were described in words, and concluded by the percentage, if the data are in numbers.

3.6 Phase 6: Evaluating the English language classroom research model

This step is to evaluate the English language classroom research model as stated in the objectives of the present study. The evaluation aimed to conduct in this phase was composed of the methods as follows:

1) Subjects

The subjects of this phase included 36 trainees from the study in Phase 4 of the model assessing and 55 trainees in the study in Phase 5 model trial.

2) Methods

To evaluate the ELCR model after the completing the phases of assessing and trialing, the following model of evaluative methods and instrument used includes:

1) The model designed based on Kirkpatrick's model to evaluate covered two groups of the training participants of the ELCR model after the project conduct. The efficiently evaluative framework based on the criteria aimed to use in this project consists of (Fetterman and Eiler, 2001):

- 1.1) participants' reactions,
- 1.2) participants' learning outcomes,
- 1.3) participants' behaviors, and

1.4) project results

2) In terms of the model of evaluation covered two characteristics composing of: 1) training project evaluation adapted from Kirkpatrick's model (Fetterman and Eiler, 2001) integrated with Dick, Carey and Carey's (2001) model, and 2) participants' language proficiency improvements. Referring to language proficiency improvements implemented from the professional training in teacher education. Lessard-Clouston (1997) concluded in English language learning strategies: an overview for L2 teachers that using language learning strategies training in the SL and FL classes helped teachers encourage their language learning and teaching. Cadorath (1998) indicated in teacher education that training sessions supplemented language opportunities, and teaching training materials. Moreover, Lamie (2002) suggested in an investigation into the process of changing. Except from trainers' attitudes, and classroom practices, one impact occurred was language communication improvement. Eventually, Heaton and others (2002) investigated questionnaire survey of Thai high school teachers' needs for reactions to further training in TESOL and concluded that teachers were clearly in discussing and improving both their language abilities and reaching practices; however, they did not have the means to do so.

According to previous studies; therefore, the target model could be adapted from two models above covering five domains to evaluate the training workshop as in Phase 4 and 5 as follows:

2.1) Participants' reaction

This evaluative type was to find out the participants' satisfactions and the worthy investment of the project,

2.2) Participants' learning outcomes

This was to assess the participants' perceived knowledge and skills obtained from training project on language classroom research.

2.3) Participants' behaviors

This evaluative type aimed to assess participants' behavioral and performance changes from learning in the training project.

2.4) Project result

It aimed to assess the results from the training project whether it affected to the trainees' professional development and their workplace or how it could affect to their learning goals of the training project.

2.5) Language proficiency improvement

This was adapted to evaluate the ELT curriculum support the for professional development that aimed to assess participants' English language proficiency.

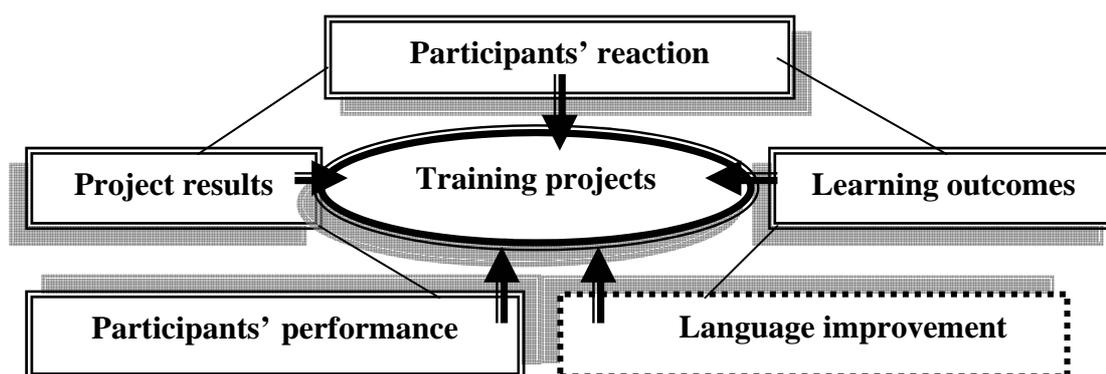


Figure 12: Model of training project evaluation

3. Evaluative instrumentation

The instrument here included:

3.1) the five-rating scaled questionnaire and the open-ended parts with the problems and suggestions. The researcher had the participants rate and write up the problems they encountered and their suggestions after the completion of the training project,

3.2) the semi-structure observation form and the participants' self-report for evaluating the training project conducted and analyzed by the researcher and assistant researchers,

4. Data analysis

The data analysis procedure was as follows:

4.1) the five-rating scaled questionnaire was analyzed by the highest percentage mode and interpreted by the description of each domain in the evaluation.

4.2) the semi-structured observation and interview were analyzed, interpreted, and described in words.

4.3) comparing the evaluation of Phase 4 and Phase 5 by using the descriptive technique.

3.7 Phase 7: Finalizing the English language classroom research model

This phase aimed to finalize the ELCR model to verify the efficiency of the English language classroom research model. The procedure included the model verification as the following points:

3.7.1) Subjects

The subjects of this phase were purposive selection sampling from the overall subjects in Phase 4 of the assessing and 5 of the trialing of the ELCR model. They

included 10 English teachers who had completed the training workshop of the trial phase. The researcher had them volunteer to take part in this phase.

3.7.2 Methods

To finalize and evaluate this phase, the researcher conducted by the using the action research method. The major procedure concisely comprised; 1) Planning, 2) Acting, 3) Observing, 4) Reflecting (Kemmis & Mc. Tagger; 1992). The researcher worked as the facilitator and the consultant together with other qualified and experienced teachers. The researcher had followed the above method as the subsequent details:

1) Planning - Developing a plan of the action to improve what is happening

The researcher informed the subjects after the training workshops in Phase 4 and Phase 5 to volunteer the project activities. The researcher let the voluntary teachers apply for the research network for the English language classroom research that they decided to be the founded problems in their actual English classrooms. Then, they chose one of the most serious the problems in classrooms to be the research issue and adopted for the English classroom research title.

2) Acting - Act to implement the plan

The researcher contacted those subjects to join the casual meeting to talk about what they had done on carrying out the classroom research in their schools as their plans. Then, the researcher had the subjects take part in the meeting and discussed to write up their ELCR proposals to present to the school administrators. The researcher let the subjects construct the instruments for their classroom research.

After the instruments were completed, the researcher and other specialists proved the content validity.

3) Observing – Observe the effects of action in the context

During this step, let those subjects try out their instruments after the reliability of the tests or the questionnaires were proved and analyzed. The subjects used those complete instruments to collect the data in the actual classroom situations. The researcher and the team observed what they had done during the research conduct.

4) Reflecting – Reflect on these effects

After collecting data, those teachers analyzed, interpreted and then wrote up their classroom research reports. At this time the researcher let them reflect what problems they had faced occurred during their research work.

3.7.3 Data collection

Collecting data included the qualitative data collection as the following steps:

1) The instruments used comprised the record of the participants' opinions (reflection), the questionnaire to explore the participants' opinions, and the observation reports of the researcher.

2) The evaluation form consisting of the self-evaluation form for the subjects and the other forms for the researcher to evaluate the subjects' research reports.

1) Lastly, the researcher had them present their English classroom research in the project final meeting at the ERIC Center at Kangkrowittaya School, Chaiyaphum Educational Service Area Office 2. Additionally, if there are some more chances, take them to present in the ELT seminar or workshop.

3.7.4 Data analysis

The data analyses were consisted of conclusion, interpretation and then reported in the descriptive method.

3.7.5 Duration of research conduct

The final research conduct was operated after the training sessions of Phase 4 and Phase 5, beginning from early January to March, 2006, Semester 2 of 2005 Academic Year, and going on from May to June, Semester 1 of 2006 Academic Year.

Overall the developmental methods of the English language classroom research model for in-service English teachers according to the research objectives stated in Chapter 1, the researcher wrote up the research report and presented it in the next step of this study. The methodology adopted for the fulfillment of the investigation can be concluded in Table 10:

Phases	Topics	Subjects	Instruments	Data analysis
1	Needs analysis on EL professional development	*119 subjects -109 for questionnaire -10 for interview (administrators)	-Questionnaire -Interview	-Percentage mode -Chi-square -Description
2	Identifying the participants' competencies	*152 subjects -122 for questionnaire -15 for interview (administrators and specialists) -15 for group discussion	-Questionnaire -Semi-structure interview -Note taking of group discussion	-Percentage mode -Chi-square -Description of the interview and group discussion
3	Developing the ELCR model	*6 specialists	-Evaluation form for the content validity	-IOC
4	Assessing the ELCR model by experimental training curriculum	*36 subjects -3 teachers for single experiment -10 teachers for small group	-Pre- and post tests -Checklist of opinion assessment	- E1/E2 model and t-test -Percentage mode -Description

		experiment -36 teachers for experimental group	-Observation form -Semi- structured interview	
Phases	Topics	Subjects	Instruments	Data analysis
5	Conducting the trial run of the ELCR model in the training workshop	*54 participants	-Pre- and post tests -Checklist of opinion assessment -Observation form -Semi- structured interview	- t-test -Percentage mode -Description
6	Evaluating the ELCR model	*36 subjects (from Phase 4) **54 subjects (from Phase 5)	-Questionnaire -Observation form -Semi-structure interview	-Percentage mode -Description
7	Finalizing the ELCR model	*10 participants	-Action research method -participants' self-evaluation -Task evaluation	-Percentage mode
The curriculum of English language classroom research				

Table 10: Summary of research methodology on the development of the English language classroom research model for in-service English teachers

CHAPTER 4

RESEARCH RESULTS AND DISCUSSIONS

This chapter presents the results of the major research and reflects back to the purposes and questions as stated in Chapter 1. The research purposes and the results of the study are presented respectively as the subsequent topics as follows:

1) Research purpose No.1 was to develop the English language classroom research model for in-service English teachers. The results were based on the research methods in Phase 1: Conducting needs analysis; Phase 2: Identifying the participants' competencies; and Phase 3: Developing the English language classroom research model.

2) Research purpose No.2 was to examine the effectiveness of the developed English language classroom research model for in-service English teachers. The results were focused on Phase 4: Assessing the efficiency of the ELCR model; and Phase 5: Conducting the trial run of the ELCR model.

3) Lastly, research purpose No.3 aimed to investigate in-service English teachers' perceptions and reactions on the constructed English language class room model. The findings could be reflected and presented by Phase 6: Evaluating the ELCR model and Phase 7: Finalizing the ELCR model.

4.1 Results of Phase 1: Conducting Needs Analysis

This study was to respond to the main research purposes and the research questions No.1: "to develop the English language classroom research model for in-

service English teachers” and the research question No. 1: “How could a practically and theoretically sound model of the English language classroom research for in-service English teachers?”

It reports the research findings of needs analysis of a training course for in-service English teachers as per the objectives of the study. In-service English teachers reported needs of the proposed contents of a teacher training course to be helpful for their professional development. In response to the research questions, the discussions are as below:

4.1.1) What training skills did secondary school English teachers need to be successful in-service English teacher training course?

1) With reference to needs on a training course in teaching approaches and instructional practices, frequency of the overall aspects revealed the ‘much’ level. However, the highest percentage of frequency revealed the aspect of learner-center process approach, curriculum development and lesson plans.

2) Overall aspects of needs on a training course in the teaching skill domain resulted in the frequency revealing the ‘much’ level. The highest frequency revealed the aspect of preparing and selecting new learning and learning activities.

3) Centering on the needs on a training course in communication skills of overall aspects, illustrated the frequency revealing the ‘much’ level. The highest frequency revealed the aspect of voice-audibility, voice speed, clarity and ability for class relationship.

4) With reference to needs on a training course in subject matter knowledge, illustrated by frequency of overall aspects, revealed the ‘much’ level.

However, the highest percentage of frequency revealed the aspect of second language acquisition.

5) Overall aspects of needs on a training course in the domain of pedagogical reasoning skills and decision making reported that the frequency revealed the 'much' level. The highest percentage of frequency revealed the aspects of preparation, interpretation, analysis of texts and development for curricular purposes.

6) Centering on the needs on a training course in the contextual knowledge domain of overall aspects illustrated that the percentage revealed the 'much' level. The highest percentage of frequency revealed in the aspect of teaching resources, e.g. syllabus, textbooks, language laboratory.

7) The domain of research for English language learning development of needs frequency on a training course of overall aspects once again revealed the 'much' level. The highest percentage of frequency revealed the aspect of doing a classroom research for language learning and teaching.

8) The open-ended questions in each aspect revealed no other suggestions from the respondents.

9) Results from training models, duration, and trainers for a training course were found that:

a) overall models of a training course reported that the frequency revealed the 'much' level. The highest percentage of frequency was the model of a workshop session.

b) regarding the training duration, overall respondents required 1 – 2 days and 3 – 5 days of training. This was revealed at the 'much' level; whereas, 1 week and 1 – 2 weeks of training were needed at the 'moderate' level. The highest

percentage of frequency revealed a training course of 3 – 5 days was required.

c) with reference to needs on the trainers of a training course, overall trainers proposed their needs at the ‘much’ level. The highest percentage of frequency revealed the aspect of trainers from the English Resource Instruction Center.

10) Results from the open-ended questionnaire: Part 3

The results from the respondents’ written in both English and Thai, were described and translated, resulting in various opinions and suggestions. English teachers stated they needed classroom research, local English curriculum, learning computer for English language learning, writing short stories for their students’ reading lessons. They also requested the need to be trained in a new session of English learning and teaching development for the new reformed curriculum. They suggested that there should have been a training course on new technology and innovations in EFL learning. Furthermore, an English teacher preferred a training course, which could improve the four English language skills for teaching. An additional suggestion was that the teachers should have known how to elicit students to learn willingly and happily. Finally, English teachers accepted that they needed to be trained for their new experiences for teaching English, especially by conducting a classroom research. They reported that they did not have the required knowledge to successfully complete in a classroom research on English language teaching. Overall, this project seemed to be very helpful and interesting for them.

4.1.2) What were the differences of needs on training skills among different English teachers' educational background, teaching experiences, and teaching between lower and upper levels?

Significant differences of needs on a training course were found in the

Domain of teaching approaches and instructional practices between two educational backgrounds, and overall perceptions of teaching experiences. The domain of teaching skills in the aspect of preparing and selecting new learning activities, awareness of learners' errors and appropriate treatment among different teaching experiences were also found different. Besides, the communication skills domain, the aspect of giving and refusing permissions, giving instructions, reasons, advice and explaining between two educational backgrounds were found to be different. Additionally, the domain of pedagogical reasoning skills and decision making in the aspect of selecting, organizing, managing and arranging of teaching methods between two educational backgrounds were found to be significantly different. Finally, the domain of research for language learning development in the aspects of application for action research in the classroom among teaching class levels, was also found to be significantly different at the 0.05 level.

4.1.3) What were the other needs of training skills for secondary school English teachers, from the school administrators' perspectives and opinions?

1) Overall respondents agreed that English was a very important skill for students with reference to life-long education and globalization. They agreed that learning skills for the students and the teaching methods needed improvement in terms of a teachers' traditional approach. The current English curriculum in secondary schools was acceptably suitable; however, there have been some problems on teachers' teaching methods, students' abilities of communication of English language, and administrators' follow-ups. Therefore, they accepted that teachers of English

needed to be trained once or twice in each semester to establish their own teaching curricula.

2) One of the most important aspects was a teachers' English language competency in listening, speaking, reading and writing skills as some teachers were still not fluent in English communication. Teaching approaches, teachers' linguistic knowledge, language assessments, teaching activities for communication, English learning resources as language laboratory or self-access and classroom research should be arranged for a training course. However, the production of teaching materials was found to be not required because various kinds of packaged-materials could be purchased for language teaching and learning.

3) The interviewees strongly agreed that the aspect of research development was the most essential for learning development and should be arranged in order of relevance to the reformed curriculum. Furthermore, they agreed that teacher's English skills composing listening, speaking, reading and writing, developing lesson plans and language assessments were of secondary importance for a training course.

In conclusion, the results revealed that English teachers needed a training course in overall domains at the 'much' level. The highest frequency of needs, in the domain research development, was the aspect of conducting a classroom research for language learning and teaching. Total aspects in each domain of needs on a teacher-training course were found to be significantly indifferent. Results from training models, duration, and trainers for a training course were found that English teachers needed the model of a workshop session of 3 – 5 days by trainers from the English Resource Instruction Center.

The qualitative data method revealed that secondary school administrators accepted a teacher training project and viewed that it was essential to improve English language teaching and learning. What they felt was most necessary for improving language learning achievement was classroom research development for language learning, and English teachers' skills of the English language for teaching.

Following to the results in research Phase 1, they lead to be a basis for the research in Phase 2. Therefore, the researcher had to further study to be able to identify the participant's competencies on classroom research. The study in Phase 2 aimed to investigate the study of perceived knowledge – understanding and needs on a training course of English language classroom research for in-service secondary school English teachers. The details are subsequently presented and discussed below.

4.2 Results of Phase 2: Identifying the Participant's Competencies

In response to research question No. 1, this step proposed to investigate the research results from phase 1, that the target subjects required the major aspect of classroom research for their professional development. To identify the subjects' competencies on classroom research, the researcher had investigated the study of perceived knowledge – understanding and needs on a training course of English language classroom research for in-service secondary school English teachers. The results of the study gained, are presented owing to the research questions as follows:

4.2.1) What were the levels of perceived classroom research knowledge and understandings among the independent variables of sex, working duration, types of secondary school and English teachers' conducting classroom research?

Referring to research question 1 above, the highest frequency of the perceived

knowledge - understandings from overall subjects among independent variable groups in aspects of general objectives, learning by instruction, roles and teacher talk, classroom interaction, and data interpretation was revealed at the "much" level. Though the others revealed at the "moderate" level. It could be assumed from the highest frequency mode in each aspect that overall subjects perceived that they had knowledge - understandings of ELCR at the "moderate" level.

4.2.2) What were the differences among the independent variables of sex, working duration, types of secondary school, and English teachers' doing classroom research?

Referring to research question 2 above, differences among overall subjects' sex, working duration, and types of school, experiences of training, and experiences of doing the ELCR are identified in six sub-points as followed:

1) Differences of perceived knowledge - understandings of ELCR between male and female were significantly different in terms of constructing the ELCR proposal; whereas, the other variables were significantly indifferent at the 0.05 level.

2) Among working duration of below six years, 6 - 15 years, 16 - 25 years, and over, differences of knowledge - understandings of the ELCR were significantly found in aspects of research issues, questions, and classroom interactions. However, others were not found at the 0.05 level.

3) Between the overall subjects' types of school including secondary schools under the jurisdiction of former General Education Department and the National Primary Office, differences were significantly found in learner behaviors; however, Though the other aspects of the ELCR were not found at the 0.05 level.

4) Differences between experiences of ELCR training courses covering the experienced and inexperienced, were not significantly found in terms of diary studies and usage of questionnaire, but the others were significantly found at the 0.05 level.

5) Amongst the experiences of teachers' doing the ELCR -- inexperienced, experienced of conducting by one's own, and experienced of doing with partners, including ELCR issues, general objectives, evaluation of problems, problem identification, research questions, diary studies, data presentation, writing report, differences were found. However, the other aspects were not found at the 0.05 significant level.

In terms of overall questionnaire items, differences of the ELCR knowledge - understandings, the results were not significantly found between sex, working duration and experiences of doing the language classroom research. In contrast, differences were significantly found at 0.05 level between types of school and experiences of training course on the language classroom research.

4.2.3) What were the levels of needs on training of English language classroom research and the model of a training course among the independent variables of sex, working duration, types of secondary school, and English teachers' doing classroom research?

The highest frequency of needs in every aspect of the ELCR from overall subjects revealed at the "much" level. It could be inferred from the highest frequency mode in each aspect that overall subjects needed to take a training course at the "much" level.

4.2.4) What were the differences of needs on training of English language classroom research and the model of a training course among the independent variables of sex, working duration, types of secondary school, and English teachers' doing classroom research?

Differences among overall subjects' sex, working duration, types of school, experiences of training, and experiences of doing of the ELCR are identified in six sub-points as follows:

1) Differences of needs in the ELCR between male and female were not significantly found at the 0.05 level.

2) Among working duration of under six years, 6 - 15 years, 16 - 25 years, and over, differences of needs on ELCR were found indifferently. Except for roles and teacher talk, differences were significantly found at the 0.05 level.

3) Between the overall subjects' types of school including secondary schools under the jurisdiction of former General Education Department and the National Primary Office, differences of needs on ELCR were not significantly found at the 0.05 level.

4) Between the experiences of the ELCR training courses covering the experienced and inexperienced, differences of needs were significantly found in aspects of learner behaviors, classroom interaction, learning strategies, and usage of questionnaires, but others were insignificantly found at the 0.05 level.

5) Amongst experiences of doing the ELCR -- inexperienced, experienced of conducting by one's own, and experienced of doing with partners, including ELCR issues, and evaluation of problems, differences of needs were found; while in other aspects, they were not found at the 0.05 significant level.

In terms of overall questionnaire items, differences of needs on ELCR were not significantly found between male and female, among working durations, between types of school and experiences of doing the language classroom research. Except for differences of needs between experiences of the training course on the language classroom research, they were significantly found at the 0.05 level. .

4.2.5) What was the most appropriate model of training on language classroom research proposed by questionnaires, a group discussion technique and the semi-structured interview from the deputy-director of the Academic Division?

This presented the needs on training models, training duration, and trainers supported by research question 5. The data were presented into sub-parts compiled from the 5-rating questionnaires, the open-ended questionnaires and a group discussion as follows:

1) The data gained from the five-rating questionnaire

The results could be concluded as the following points:

1.1) Overall models of a training course reported that the frequency revealed the 'much level'. The highest percentage of frequency was the model of workshop session (n = 66; 54.1%).

1.2) Regarding the training duration, overall respondents needed 1 - 2 days and 3 - 5 days of training at the 'much level', whereas, 1 to 2 weeks of training were required at the "moderate and little" levels. The highest percentage of frequency revealed a training course of 1 - 2 days (n = 42; 34.4%).

1.3) With reference to needs of the trainers on a training course, overall respondents' needs were at the "moderate and much" level. The highest percentage of

frequency revealed the aspect of trainers from experienced researchers (n = 47; 38.5%).

2) The data from the open-ended questionnaire

2.1) The respondents' additional suggestions of needs on a ELCR training course

For research question 5, this sub-section included additional opinions from the respondents' questionnaires. This illustrated two points, both of ELCR problems and needs on a training course from their perspectives.

a) The problems of ELCR they previously encountered

1) Previous training courses required trainers to understand classroom research methods only. So, the previous trainers could not conduct nor practice the classrooms research themselves.

2) Different research examples of classroom research were not available for trainees to practice.

3) The trainees should have learnt about ELCR research and been able to practice directly after a training course. At the same time, the trainers should have continually followed up their practices and given advice.

4) There should have been adequate support from the school directors, so the English language teachers could succeed in conducting the ELCR research.

b) The needs on a training course from the respondents' perspectives

1) An English language training course proposal derived from additional opinions, should only be specified on the field of English language teaching.

2) Around 60% of respondents indicated that a training course should be in a workshop format, and the trainers should participate, and continually give advice and feedback during the session.

3) The training duration should have been managed into a 1-2 day session and allowed trainees to practice writing in each step during another 1 - 2 days session. After which two more sessions should have been conducted within a 1 - 2 day period with a follow up for each session. The trainers also had to provide the consultations during the workshop sessions for the trainees.

4) Trainers should have had sufficient experiences of the ELCR. They should also have acted as the consultants during the research project until the trainees had succeeded in their research goals.

2.2) The data from a group discussion

For additional support of research question 5, this section aimed to conclusively demonstrate EL teachers' perspectives on current classroom research practices both in primary and secondary schools as well as for English teachers. The two major problems on ELCR problems and its resolutions are:

1) The difficulties of current ELCR were in its models, because some teacher groups in the Primary Education Division conducted the classroom research in the informal form called one-page research. However, some trainers gave lectures of classroom research in the complete format. This made teachers confused about the real format of the classroom research that suited the policy of the Ministry of Education. The main problem was that teachers lacked the source of research documents for the references to conduct the classroom research. Additionally, the participant reported that there were insufficient consultants to help them conduct the

classroom research successfully. Furthermore, they encountered the problem on theoretical practices when doing this kind of research. The teachers should have had budget support in conducting classroom research. Lastly, they needed to know what topics on classroom research they had to complete, such as preparing topics of teaching, learning materials, teaching methods, measurements and evaluation, and learning activities.

To summarize, at this point, the participants in this study reported that teachers lacked the knowledge of the real format of the ELCR, sources of research documents, and research consultants. Moreover, the school administrators should have provided funding to support in conducting classroom research. Finally, teachers needed to know precisely, the research topics they should have completed..

2) From the group discussion, participants suggested that there should have been a certain format to the classroom research admitted by the school policy on research development for learning improvement. In addition, the research documents and clinic for research consulting in schools should have been provided. They also proposed that there should have been an intensive training course, which could assist teachers complete their classroom research. This training course practice should have been obvious in the format, and scope of a particular method of EFL research. Inevitably, there should have been consultants available to help them during the research conduction periods.

3) The data from semi-structured interviews

This section presents the outcomes from semi-structured interviews, which were conducted to investigate problems and needs on classroom research, particularly

in the scope of ELT. The interviewees that participated in this study included 5 directors from the Primary Education Division, 7 deputy-directors responsible for the school Academic Affairs, and 3 experts on classroom research. Overall outcomes are briefly presented as follows:

1) The interviewees' opinions implied that practices of conducting classroom research seemed to be incomplete, due to the current classroom research methods, as the report formats are unclear to teachers. Moreover, the interviewees reported that most teachers had not conducted classroom research.

2) The reasons for improvements of classroom research practices were misinterpreted. Hence, it was reported that most teachers, together with English teachers concluded that the classroom research was not to improve the real conditions of students' learning processes. The classroom research had been done only for school documents purposing for the policy of Educational Quality Assurance, or for a teachers' promotion.

3) The major problem of teachers' classroom research was reported by teachers as the participants of this study that most teachers in primary and secondary schools had not been realized in conducting classroom research. Formerly, training courses were provided in the format of lectures and seminar sessions which could not be of help to teachers in real practice.

Questions concerning the specific problem on English language classroom research were conducted. The outcomes were reported that English teachers mainly encountered significant problems on: 1) identifying research problems, 2) research design, 3) constructing research instruments, and 4) collecting and analyzing data.

4) The interviewees' opinions on how to actively promote teachers to achieve

conducting classroom research according to the new 2002 Curriculum comprised: 1) encouraging teachers' awareness in teaching improvement, 2) instructing teachers about classroom research, and 3) training and coaching while practicing teachers working in groups.

5) For the proposed training curriculum of classroom research, as well as EFL classroom research, overall interviewees reported and responses could be interpreted as; that the trainers or curriculum developers should have teachers learn by giving lectures. Different examples of research reports should have been presented during a training workshop session. In addition, those teachers should practice conducting research under coaching sessions. Eventually, they should have presented their research and the trainers should also have given them comments for further improvements.

On the whole, the results of the study in Phase 2 revealed conclusively that:

1) The subjects' perceived their knowledge and understandings in every item at the level of the "moderate" level. Differences between male and female, among working duration, experiences of doing the ELCR were not significantly found. But differences between two types of school, and experiences training in the English language classroom research course were significantly found at the 0.05 level.

2) In terms of needs on a training course, it was found that the needs on a training course of English language classroom research in every aspect were at the "much" level. While differences of needs between male and female, among working duration, between two types of school, and experiences of doing the ELCR were not found to be different. Except for differences of needs between experiences of the ELCR training course, they were significantly found at the 0.05 level.

3) The qualitative data derived from both the secondary school EL teachers' group discussion and interviewees on language classroom research, wholly viewed that there should have been a specific curriculum of the ELCR, with a certain method, process, report format, and research resources to propose the educational authorities. Besides that, examples of research reports on the ELCR, and research consultants should be provided while participating in a training course or conducting the ELCR. Lastly, the model of an anticipated training course should have been a workshop session within 1 - 2 day training period in each session of practices. For the trainers, the subjects proposed that experienced researchers into the field of ELT should have been provided.

The results from the study of Phase 2 could be traceable for the next phase to develop the curriculum of the English language classroom research model as the subsequent topic.

4.3 Results of Phase 3 – Developing the English Language Classroom Research Model

To respond to the main research purpose and also question No.1, this section presents the results of Phase 3 based on the research methodology mentioned in Chapter 3. In developing the English model, the researcher studied the related literature, comprised of different kinds of documents and research on language teaching and classroom research. The developed model of the English language classroom research includes eight modules approved by the thesis committee. Each module contains the guidelines of the curriculum practices, content lists, and multiple-

choice tests after studying the contents of the language classroom research. The results of this phase are presented in three points:

1) The contents of each module developed from the review of related literatures and documents of the English language classroom research.

They are illustrated in Table 11, Column 1.

2) The results from six specialists' checks of the item objective congruence (IOC) for the content validity are shown in Table 11, Columns 2 – 5.

3) Three specialists' checks of the item objective congruence (IOC) for the language used in the curriculum are shown in Table 11, Columns 6 – 9. The interpretation of the results includes:

- 1) +1 represents that the contents and the language used are appropriate,
- 2) 0 represent that the contents and the language are uncertainly appropriate,
- 3) -1 represents that the contents and the language used are inappropriate,

The results are presented in Table 11 as follows:

Module 1: Identifying Background Knowledge of ELCR								
<i>Elements of the developed language classroom research</i>	<i>Contents</i>			IOC Value	<i>Language</i>			IOC Value
	+1	0	-1		+1	0	-1	
1) Definition	5	1	-	0.83	3	-	-	1.0
2) Scope	6	-	-	1.0	3	-	-	1.0
3) Value	6	-	-	1.0	3	-	-	1.0
4) Characteristics	6	-	-	1.0	3	-	-	1.0
5) Process	6	-	-	1.0	3	-	-	1.0
6) Limitation	6	-	-	1.0	3	-	-	1.0
7) Trainees' self-evaluation	6	-	-	1.0	3	-	-	1.0
8) Test: Self-evaluation	----	--	--	-----	--	---	--	-----
8.1) Item 1	6	-	-	1.0	2	1	-	0.66
8.2) Item 2	6	-	-	1.0	2	1	-	0.66
8.3) Item 3	6	-	-	1.0	2	1	-	0.66
8.4) Item 4	6	-	-	1.0	2	1	-	0.66
8.5) Item 5	6	-	-	1.0	3	-	-	1.0
8.6) Item 6	6	-	-	1.0	2	1	-	0.66
8.7) Item 7	6	-	-	1.0	2	1	-	0.66
9. Self-development for remedial training model	6	-	-	1.0	2	1	-	0.66

Module 2: Basic Elements of ELCR								
1. Major issues	6	-	-	1.0	2	1	-	0.66
2. Evaluating and developing the problems:	6	-	-	1.0	2	1	-	0.66
2.1 Stage 1: What are the problems	6	-	-	1.0	2	1	-	0.66
2.2 Stage 2: Selecting problem issues	6	-	-	1.0	2	1	-	0.66
2.3 Stage 3: Considering issues the problems concern	6	-	-	1.0	2	1	-	0.66
Module 2: Basic Elements of ELCR								
2.4 Stage 4: Developing classroom research problems	6	-	-	1.0	2	1	-	0.66
3. Variables	6	-	-	1.0	2	1	-	0.66
4. Hypotheses					2	1	-	0.66
5. Trainee's self-evaluation	6	-	-	1.0	2	1	-	0.66
6. Test: Self-evaluation	----	--	--	-----	--	---	--	-----
6.1 Item 1	6	-	-	1.0	3	-	-	1.0
6.2 Item 2	6	-	-	1.0	3	-	-	1.0
6.3 Item 3	6	-	-	1.0	2	1	-	0.66
6.4 Item 4	6	-	-	1.0	3	-	-	1.0
6.5 Item 5	6	-	-	1.0	2	1	-	0.66
6.6 Item 6	6	-	-	1.0	3	-	-	1.0
6.7 Item 7	6	-	-	1.0	3	-	-	1.0
6.8 Item 8	6	-	-	1.0	3	-	-	1.0
9. Self-development for remedial training model	6	-	-	1.0	2	1	-	0.66
Module 3: Review of Related Literature in ELCR								
<i>Elements of the developed language classroom research</i>	<i>Contents</i>			<i>IOC Value</i>	<i>Language</i>			<i>IOC Value</i>
	<i>+1</i>	<i>0</i>	<i>1</i>		<i>+1</i>	<i>0</i>	<i>1</i>	
1. Definition and characteristics	6	-	-	1.0	3	-	-	1.0
2. Objectives, importance, and selection	6	-	-	1.0	3	-	-	1.0
3. Writing the report	6	-	-	1.0	3	-	-	1.0
4. Referencing	5	1	-	0.83	2	1	-	0.66
5. Trainee's self evaluation	6	-	-	1.0	3	-	-	1.0
6. Test: Self-evaluation	---	--	--	-----	--	---	--	-----
6.1 Item 1	6	-	-	1.0	3	-	-	1.0
6.2 Item 2	6	-	-	1.0	3	-	-	1.0
6.3 Item 3	6	-	-	1.0	3	-	-	1.0
6.4 Item 4	6	-	-	1.0	2	1	-	0.66
6.5 Item 5	6	-	-	1.0	2	1	-	0.66
6.6 Item 6	6	-	-	1.0	2	1	-	0.66
6.7 Item 7	6	-	-	1.0	3	-	-	1.0
6.8 Item 8	6	-	-	1.0	3	-	-	1.0
7. Self-development for remedial training model	6	-	-	1.0	3	-	-	1.0
Module 4: Developing Innovations in ELCR								
1. Definitions and characteristics	6	-	-	1.0	3	-	-	1.0
2. Categories of innovations	---	--	--	-----	--	---	--	-----
2.1 Innovations based on instruction and teacher talk	6	-	-	1.0	2	1	-	0.66
2.2 Innovations based on learner behavior and interaction	5	1	-	0.83	2	1	-	0.66

3. The role and development of instructional innovations	6	-	-	1.0	3	-	-	1.0
4. Example cases of innovation development	6	-	-	1.0	2	1	-	0.66
5. Trainee's self evaluation	6	-	-	1.0	3	-	-	1.0
6. Test: Self-evaluation	---	--	--	-----	--	---	--	-----
6.1 Item 1	6	-	-	1.0	2	1	-	0.66
6.2 Item 2	6	-	-	1.0	2	1	-	0.66
6.3 Item 3	6	-	-	1.0	2	1	-	0.66
6.4 Item 4	6	-	-	1.0	2	1	-	0.66
Module 4: Developing Innovations in ELCR								
6.5 Item 5	6	-	-	1.0	2	1	-	0.66
6.6 Item 6	6	-	-	1.0	2	1	-	0.66
6.7 Item 7	6	-	-	1.0	2	1	-	0.66
6.8 Item 8	6	-	-	1.0	2	1	-	0.66
6.9 Item 9	6	-	-	1.0	2	1	-	0.66
7. Self-development for remedial training model	6	-	-	1.0	2	1	-	0.66
Module 5: Designing ELCR								
<i>Elements of the developed language classroom research</i>	<i>Contents</i>			<i>IOC Value</i>	<i>Language</i>			<i>IOC Value</i>
	<i>+1</i>	<i>0</i>	<i>-1</i>		<i>+1</i>	<i>0</i>	<i>1</i>	
1. Quantitative :Experimental designs	----	--	--	-----	--	--	--	-----
1.1 Definition	6	-	-	1.0	3	-	-	1.0
1.2 Major components	6	-	-	1.0	2	1	-	0.66
1.3 Single group designs	6	-	-	1.0	2	1	-	0.66
1.4 Quasi-experimental designs	6	-	-	1.0	3	-	-	1.0
2. Qualitative research	----	--	--	-----	--	--	--	-----
2.1 Definition and major characteristics	6	-	-	1.0	3	-	-	1.0
2.2 Why do we need to do?	6	-	-	1.0	3	-	-	1.0
2.3 Conducting a qualitative research	6	-	-	1.0	2	1	-	0.66
5. Trainee's self evaluation	6	-	-	1.0	3	-	-	1.0
6. Test: Self-evaluation	----	--	--	-----	--	--	--	-----
6.1 Item 1	6	-	-	1.0	2	1	-	0.66
6.2 Item 2	6	-	-	1.0	3	-	-	1.0
6.3 Item 3	6	-	-	1.0	3	-	-	1.0
6.4 Item 4	6	-	-	1.0	3	-	-	1.0
6.5 Item 5	6	-	-	1.0	3	-	-	1.0
6.6 Item 6	6	-	-	1.0	3	-	-	1.0
6.7 Item 7	6	-	-	1.0	3	-	-	1.0
6.8 Item 8	6	-	-	1.0	3	-	-	1.0
7. Self-development for remedial training model	6	-	-	1.0	2	1	-	0.66
Module 6: Collecting Data through Language Classroom Research								
1. Determining what constitute data	6	-	-	1.0	3	-	-	1.0
2. Collecting quantitative data procedures	6	-	-	1.0	3	-	-	1.0
3. Description of data collection procedures	6	-	-	1.0	2	1	-	0.66
4. Procedures of data collection	----	--	--	-----	--	--	--	-----
4.1 Interviews	6	-	-	1.0	2	1	-	0.66
4.2 Record reviews	6	-	-	1.0	3	-	-	1.0
4.3 Diaries	5	1	-	0.83	2	1	-	0.66
4.4 Observations	5	1	-	0.83	2	1	-	0.66
4.5 Verbal reporting	6	-	-	1.0	2	1	-	0.66
4.6 Questionnaires	5	1	-	0.83	2	1	-	0.66
4.7 Tests	5	1	-	0.83	2	1	-	0.66
5. Issues and problems in collecting data	6	-	-	1.0	3	-	-	1.0

6. Assuring the quality of the data	----	--	--	-----	--	--	--	-----
5.1 Reliability	6	-	-	1.0	3	-	-	1.0
5.2 Validity	5	1	-	0.83	2	1	-	0.66
7. Trainee's self evaluation	6	-	-	1.0	3	-	-	1.0
8. Test: Self-evaluation	----	--	--	-----	--	--	--	-----
8.1 Item 1	6	-	-	1.0	3	-	-	1.0
8.2 Item 2	6	-	-	1.0	3	-	-	1.0
8.3 Item 3	6	-	-	1.0	3	-	-	1.0
Module 6: Collecting Data through Language Classroom Research								
8.4 Item 4	6	-	-	1.0	3	-	-	1.0
8.5 Item 5	6	-	-	1.0	3	-	-	1.0
8.6 Item 6	6	-	-	1.0	3	-	-	1.0
8.7 Item 7	6	-	-	1.0	3	-	-	1.0
8.8 Item 8	6	-	-	1.0	3	-	-	1.0
8.9 Item 9	6	-	-	1.0	3	-	-	1.0
9. Self-development for remedial training model	6	-	-	1.0	2	1	-	0.66
Module 7: Analyzing Data through ELCR								
1. Data analysis and the design	----	--	---	-----	---	--	--	-----
1.1 Definition	6	-	-	1.0	3	-	-	1.0
1.2 Techniques	6	-	-	1.0	3	-	-	1.0
2. Analyzing quantitative research data	6	-	-	1.0	2	1	-	0.66
3. Analyzing descriptive research data	----	--	---	-----	---	--	--	-----
3.1 Frequencies	5	1	-	0.83	2	1	-	0.66
3.2 Central tendency measures	6	-	-	1.0	3	-	-	1.0
3.3 Variability	6	-	-	1.0	2	1	-	0.66
4. Analyzing experimental research data	----	--	---	-----	---	--	--	-----
4.1 The t-test	6	-	-	1.0	2	1	-	0.66
4.2 The Chi-square	6	-	-	1.0	2	1	-	0.66
4.3 Using the computer for the data analysis	6	-	-	1.0	2	1	-	0.66
5. Trainee's self evaluation	6	-	-	1.0	3	-	-	1.0
6. Test: Self-evaluation	----	--	--	-----	--	--	--	-----
6.1 Item 1	6	-	-	1.0	3	-	-	1.0
6.2 Item 2	6	-	-	1.0	3	-	-	1.0
6.3 Item 3	6	-	-	1.0	3	-	-	1.0
6.4 Item 4	6	-	-	1.0	3	-	-	1.0
6.5 Item 5	6	-	-	1.0	3	-	-	1.0
6.6 Item 6	6	-	-	1.0	3	-	-	1.0
6.7 Item 7	6	-	-	1.0	3	-	-	1.0
6.8 Item 8	6	-	-	1.0	3	-	-	1.0
7. Self-development for remedial training model	6	-	-	1.0	3	-	-	1.0
Module 8: Reporting, Summarizing, and Interpreting the Results								
1. Reporting and summarizing	----	--	--	-----	--	--	--	-----
1.1 Quantitative research	6	-	-	1.0	3	-	-	1.0
1.2 Qualitative research	6	-	-	1.0	3	-	-	1.0
2. Interpreting the results	----	--	--	-----	--	--	--	-----
2.1 Conclusions	6	-	-	1.0	3	-	-	1.0
2.2 Implications	6	-	-	1.0	3	-	-	1.0
2.3 Recommendations	6	-	-	1.0	3	-	-	1.0
3. Reporting the research	6	-	-	1.0	3	-	-	1.0
3.1 Types of reports	6	-	-	1.0	3	-	-	1.0
3.2 The components of the reports	6	-	-	1.0	3	-	-	1.0

4. Trainee's self evaluation	6	-	-	1.0	3	-	-	1.0
5. Test: Self-evaluation	----	--	--	-----	--	--	--	-----
5.1 Item 1	6	-	-	1.0	3	-	-	1.0
5.2 Item 2	6	-	-	1.0	3	-	-	1.0
5.3 Item 3	6	-	-	1.0	3	-	-	1.0
5.4 Item 4	6	-	-	1.0	3	-	-	1.0
5.5 Item 5	6	-	-	1.0	3	-	-	1.0
5.6 Item 6	6	-	-	1.0	3	-	-	1.0
Module 8: Reporting, Summarizing, and Interpreting the Results								
5.7 Item 7	6	-	-	1.0	3	-	-	1.0
6. Self-development for remedial training model	6	-	-	1.0	3	-	-	1.0

Table 11: The specialists' checks of the item objective congruence values (IOC)

From Table 11, the results of six specialists' checks of the IOC values are presents in the following points:

1) For the contents of the ELCR model, it was found that the values of the Item Objective Congruence (IOC) were found appropriate and acceptable (the IOC values were between the values of 0.83 to 1.0). It meant that overall the specialists' opinions were higher than 80%.

2) For the contents of the ELCR model in terms of the language used for compiling the model, it was found that the values of the Item Objective Congruence (IOC) were found appropriate and acceptable (the IOC values were between the values of 0.66 to 1.0). This meant that overall the specialists' opinions were higher than 66% or two thirds of the specialists' opinions.

3) For the open-ended part of each content check, the specialists suggested the following sub-parts:

3.1) there should have been more up to date references and bibliographies that were written after the Year 2001 in Module 3: Review of related literature,

3.2) there should have been more designs in Module 5, and

3.3) the language used in writing up each module was quite appropriate; however, the researcher corrected the language written up by following the corrections of three language specialists.

In conclusion, to response to the main research purpose and question No.1 to develop the English language classroom research model, the results in Phase 1: Conducting needs analysis revealed the needs of the English language classroom research for language teacher training. Then, Phase 2: Identifying the participant's competencies revealed that the teachers' research competencies were at the moderate level, but their needs were at the much level. Therefore, the previous two studies in Phases 1 and 2 implied the results to develop the research Phase 3: Developing the ELCR model. Finally, the results of the content validity from the specialists' checks were found appropriate.

4.4 Results of Phase 4 – Assessing the Efficiency of the English Language Classroom Research Model

To validate the ELCR model except for the content validity illustrated in Phase 3, this phase presents the effectiveness to respond to the main research purpose and question No.2 based on the present research methodology in Chapter 3. The results were derived from the teacher training for assessing the efficiency of the English language classroom research model. The participants were secondary school English teachers working in Chaiyaphum Educational Service Area Office 1 as stated in the research methods of Phase 4. The data from the training session organized on November 24–25, 2005 are presented in 5 parts as follows:

4.4.1) The results of the test item analysis

Results from Phase 3: Developing the ELCR model, this part aims to present the results of Phase 4: assessing the efficiency of the model in terms of the item analysis of all the test items by using the statistical software program of Item Analysis System (IAS). The results are the difficulty (p-value), discrimination (r-value) and the KR 20 for the reliability value shown in Table 12:

Items	p	r	Interpretation	Items	p	r	Interpretation
1	0.540	0.110	Appropriate	32	0.420	0.355	Appropriate
2	0.680	0.164	Appropriate	33	0.380	0.189	Appropriate
3	0.380	0.362	Appropriate	34	0.500	0.364	Appropriate
4	0.440	0.278	Appropriate	35	0.480	0.228	Appropriate
5	0.560	0.317	Appropriate	36	0.280	0.331	Make easier
6	0.340	0.267	Appropriate	37	0.480	0.460	Make easier
7	0.440	0.379	Appropriate	38	0.360	0.444	Appropriate
8	0.360	0.131	Appropriate	39	0.660	0.379	Appropriate
9	0.340	0.172	Appropriate	40	0.680	0.367	Appropriate
10	0.220	0.278	Make easier	41	0.360	0.384	Appropriate
11	0.780	-0.81	<i>Make more difficult</i>	42	0.620	0.012	Appropriate
12	0.540	0.068	<i>Make more difficult</i>	43	0.380	0.379	Appropriate
13	0.360	0.180	<i>Make more difficult</i>	44	0.600	0.153	Appropriate
14	0.560	0.163	<i>Make more difficult</i>	45	0.360	0.219	Appropriate
15	0.420	0.350	Appropriate	46	0.560	0.269	Appropriate
16	0.460	0.271	Appropriate	47	0.440	0.438	Appropriate
17	0.420	0.526	Appropriate	48	0.260	0.339	Make easier
18	0.200	0.051	Make easier	49	0.320	0.385	Appropriate
19	0.400	0.299	Appropriate	50	0.360	0.120	Appropriate
20	0.340	0.280	Appropriate	51	0.360	0.400	Appropriate
21	0.640	0.045	Appropriate	52	0.360	0.444	Appropriate
22	0.360	0.076	Appropriate	53	0.280	0.390	Make easier
23	0.260	0.069	Make easier	54	0.260	0.400	Make easier
24	0.380	0.303	Appropriate	55	0.420	0.291	Appropriate
25	0.280	0.184	Make easier	56	0.340	0.289	Appropriate
26	0.160	0.036	Make easier	57	0.340	0.545	Appropriate
27	0.340	0.005	Make easier	58	0.280	0.360	Make easier
28	0.360	0.219	Appropriate	59	0.420	0.371	Appropriate
Items	p	r	Interpretation	Items	p	r	Interpretation
29	0.240	0.442	Make easier	60	0.460	0.128	Appropriate
30	0.660	0.123	Make easier	61	0.200	0.005	Make easier
31	0.460	0.308	Appropriate	KR 20 = 0.78			

Table 12: The results of the item analysis

Table 12 presents the results from the test item analysis. The data are interpreted as follows:

- 1) The difficulty value (p) and the discrimination (r) of each item were found

that the test items were appropriate in No. 1 – 10, 15 – 17, 19 – 22, 24, 28, 31 – 35, 37 – 47, 49 – 52, 55 – 57, and 59 – 60. Overall 41 items were found.

2) The items that were quite difficult should have been improved to be easier consisting of No. 10, 18, 23, 25 – 27, 36 – 37, 48, 53 – 54. 58 and 61. It was found that 13 items were quite difficult.

3) The items that were quite easy should have been improved to be more difficult comprising No's 11 – 14. Overall were quite easy 4 items.

To improve the quite easy and difficult items for more appropriateness, the researcher altered them in terms of the language used in the questions and answers. For the quite easy items, the answers in the form of choices were rewritten, but for the quite difficult items, the new questions and answers were rewritten up. Finally, overall test items were assigned for the subjects to reevaluate in an external training section. The results revealed and are presented in Table 13:

Items	p	r	Interpretation	Items	p	r	Interpretation
10	0.380	0.283	Appropriate	27	0.580	0.119	Appropriate
11	0.620	0.074	Appropriate	36	0.540	0.359	Appropriate
12	0.540	0.075	Appropriate	37	0.580	0.289	Appropriate
13	0.360	0.163	Appropriate	48	0.500	0.273	Appropriate
14	0.580	0.156	Appropriate	53	0.360	0.201	Appropriate
18	0.420	0.163	Appropriate	54	0.400	0.262	Appropriate
23	0.480	0.139	Appropriate	58	0.380	0.289	Appropriate
25	0.320	0.150	Appropriate	KR-20 = 0.77			
26	0.380	0.099	Appropriate				

Table 13: The improved test items from Table 12

From Table 13, we can see that every item that should have been improved, for its 'p' and 'r' values was improved to be more appropriate. The reliability value (KR-20) revealed 0.77 which was lower than the previous items analysis of KR-20 = 0.78.

The results can be interpreted that the test of the ELCR model was appropriate for using in the actual practice for training in the next phase of trialing the model.

4.4.2) The results of the experiment assessment of the model

The assessment for the effectiveness of the ELCR model was carried out with the subjects in each group by using the formula of E1/E2. The results are respectively presented as in Table 14:

1) The results of the single experimental assessment of one/one with 3 subjects are in Table 14 a:

Subject No.	Pre-test scores (61)	Exercise scores (65)	Post-test scores (61)	Assessment results
1	22	46	46	E1/E2 = 75.38/74.95
2	23	48	49	
3	20	53	44	
Total	65	147	139	
Results	-	75.38	75.95	

Table 14 a: The results of the single experimental assessment 1

The results from Table 14 a are shown from the assessment E1/E2 revealed 75.38/75.95. The result revealed at the expected result of 75/75.

3) The results of the single experimental assessment of small group for one/one with 10 subjects are in Table 14 b:

Subject No.	Pre-test scores (61)	Exercise scores (65)	Post-test scores (61)	Assessment results
1	30	54	53	E1/E2 = 75.07/75.40
2	25	47	48	
3	19	45	47	
4	19	49	46	
5	19	48	47	
6	17	47	45	
7	19	48	42	
8	18	48	41	
9	20	49	45	
10	22	53	46	
Total	208	488	460	
Results	-	75.07	75.40	

Table 14 b: The results of the single experimental assessment 2

The results from Table 14 b are shown from the assessment of the small group- E1/E2 revealed 75.07/75.40 which was at the expected result of 75/75.

4) The results of the field experimental assessment of larger group with 36 subjects are in Table 14 c:

Subject No.	Pre-test scores (61)	Exercise scores (65)	Post-test scores (61)	Assessment results
1	30	57	51	E1/E2 = 75.98/76.18
2	25	55	50	
3	19	48	45	
4	19	48	46	
5	19	48	42	
6	17	45	42	
7	19	48	48	
8	18	48	47	
9	20	49	42	
10	22	50	40	
11	12	42	39	
12	20	49	43	
13	13	44	42	
14	18	50	48	
15	23	55	50	
16	17	46	43	
17	18	48	44	
18	25	57	51	
19	24	52	47	
20	17	45	52	
21	27	58	51	
22	25	56	50	
23	27	60	54	
24	17	48	45	
25	15	46	44	
26	14	45	43	
27	18	46	47	
28	19	50	54	
29	23	52	49	
30	18	49	46	
31	20	47	45	
32	26	55	52	
33	13	42	45	
34	21	48	49	
35	23	49	50	
36	16	50	45	
Total	717	1778	1673	
Results	-	75.98	76.18	

Table 14 c: The results of the efficiency assessment from experimental groups

The results from Table 14 c are shown from the field experiment assessment of the large group- E1/E2 revealed 75.89/76.18 which was again equaled the expected result of 75/75.

4.4.3) The results from the assessment of the participants' opinions

This section includes the results from the assessment of the efficiency of the ELCR model from the participants' opinions covering: 1) the content difficulty and 2) the participants' understanding during the training workshop in Phase 4. The instrument used was the checklist with five-rating scales. The results were analyzed by using the mode of the highest percentage in each module and content lists, interpreted as in Table 15.

Module 1: Identifying Background Knowledge of ELCR				
Item content lists	Content Difficulty		Understandings	
	Highest % of mode	Meaning	Highest % of mode	Meaning
1. Definition	36.1 - 3	Moderate	44.4 - 4	Much
2. Scope	41.7 - 4	Much	52.8 - 4	Much
3. Value	47.2 - 4	Moderate	55.6 - 4	Much
4. Characteristics	41.7 - 3	Moderate	52.8 - 4	Much
5. Process	38.9 - 3	Moderate	50.0 - 4	Much
6. Limitation	41.7 - 3	Moderate	41.7 - 4	Much
7. The handouts of the content knowledge	44.4 - 3	Moderate	47.2 - 4	Much
8. The trainer's explanation	47.2 - 3	Moderate	41.7 - 4	Much
Conclusion of mode	3	Moderate	4	Much
Module 2: Basic Elements of ELCR				
1. Major issues	55.6 - 4	Much	50.0 - 4	Much
2. Evaluating and developing research problems	-----	-----	-----	-----
2.1 What are the problems?	44.4 - 4	Much	55.6 - 4	Much
2.2 Selecting problem issues	47.2 - 4	Much	50.0 - 4	Much
2.3 Considering issues	50.0 - 3	Moderate	50.0 - 4	Much
2.4 Developing CR questions	47.2 - 4	Much	44.4 - 4	Much
3. Variables of the research	38.9 - 4	Much	41.7 - 4	Much
4. Hypotheses	47.2 - 4	Much	44.4 - 4	Much
5. The handouts of the content	50.0 - 4	Much	58.3 - 4	Much
6. The trainer's procedures of Presentation	52.8 - 4	Much	52.8 - 4	Much
Conclusion of mode	4	Much	4	Much

Module 3: Review of related Literature in ELCR				
1. Definition	38.9 - 4	Much	50.0 - 4	Much
2. Scope	41.7 - 3	Much	47.2 - 4	Much
3. Values	44.4 - 4	Much	44.4 - 3	Much
4. Characteristics	47.2 - 4	Much	63.9 - 4	Much
5. Process	44.4 - 4	Much	55.6 - 4	Much
6. Limitation	47.2 - 4	Much	47.2 - 4	Much
7. The handouts of the content	41.7 - 4	Much	52.8 - 4	Much
8. The trainer's explanation	44.4 - 4	Much	52.8 - 4	Much
Conclusion of mode	4	Much	4	Much
Module 4: Innovation Development in ELCR				
1. Definition and characteristics	51.1 - 4	Much	55.6 - 4	Much
2. Category of innovations	47.2 - 4	Much	41.7 - 4	Much
2.1 innovations of instruction and teacher talk	52.8 - 4	Much	58.3 - 4	Much
1) Teaching material innovations	55.6 - 4	Much	50.0 - 4	Much
2) Teaching and learning process innovations	55.6 - 4	Much	50.0 - 4	Much
2.2 Innovation development of learner behavior and interaction	55.6 - 4	Much	41.7 - 4	Much
3. The role and development of instructional innovations	50.0 - 4	Much	47.2 - 4	Much
3.1 The role	55.6 - 4	Much	47.2 - 4	Much
3.2 The development	63.9 - 4	Much	55.6 - 4	Much
3.3 Procedures	58.3 - 4	Much	50.0 - 4	Much
4. Example cases of innovation development	50.0 - 4	Much	44.4 - 4	Much
Conclusion of mode	4	Much	4	Much
Module 5: Designing ELCR				
1. Quantitative research: Experimental design	-----	-----	-----	-----
1.1 Definition and major components	52.8 - 4	Much	66.7 - 4	Much
1.2 Research designs	50.0 - 4	Much	47.2 - 4	Much
2. Qualitative research	-----	-----	-----	-----
2.1 Definition and major characteristics	61.1 - 4	Much	47.2 - 4	Much
2.2 Why do we need to do qualitative research?	58.3 - 4	Much	52.8 - 4	Much
2.3 Conducting a qualitative inquiry	52.8 - 4	Much	50.0 - 4	Much
1) Heuristic or hypothesis generating	47.2 - 4	Much	47.2 - 4	Much
2) Deductive or hypothesis testing	41.7 - 4	Much	61.1 - 4	Much
3) Procedures of conducting	38.9 - 3	Moderate	58.3 - 4	Much
4) The uses of qualitative research	38.9 - 4	Much	55.6 - 4	Much
5) The problems of non-participants observations	52.8 - 4	Much	58.3 - 4	Much
Conclusion of mode	4	Much	4	Much

Module 6: Collecting Data in ELCR				
1. Determining what constitute data	55.6 - 4	Much	47.2 - 4	Much
2. Procedures in quantitative Research	58.3 - 4	Much	50.0 - 4	Much
3. Description of data collection procedures	52.8 - 4	Much	52.8 - 4	Much
4. Procedures in qualitative and quantitative research typical uses	55.6 - 4	Much	47.2 - 4	Much
4.1 Interviews	44.4 - 4	Much	44.4 - 4	Much
4.2 Record reviews	50.0 - 4	Much	52.8 - 4	Much
Module 6: Collecting Data in ELCR				
4.3 Diaries	50.0 - 4	Much	44.4 - 4	Much
4.4 Observations	55.6 - 4	Much	52.8 - 4	Much
4.5 Verbal reporting	55.6 - 4	Much	58.3 - 4	Much
4.6 Questionnaires	47.2 - 4	Much		Much
4.7 Tests	50.0 - 4	Much	52.8 - 4	Much
5. Issues and problems in collecting language data	47.2 - 4	Much	58.3 - 4	Much
6. Assuring the quality of the data and data collection procedures	41.7 - 3	Moderate	58.3 - 4	Much
6.1 Reliability	50.0 - 4	Much	44.4 - 4	Much
6.2 Validity	41.7 - 4	Much	47.2 - 4	Much
Conclusion of mode	4	Much	4	Much
Module 7: Analyzing Data through ELCR				
1. Data analysis and the design of the study	47.2 - 4	Much	52.8 - 4	Much
2. Analyzing quantitative data	47.2 - 4	Much	47.2 - 4	Much
3. Analyzing descriptive data	47.2 - 4	Much	50.0 - 4	Much
3.1 Frequencies	52.8 - 4	Much	44.4 - 4	Much
3.2 Central tendency measures	52.8 - 4	Much	50.0 - 4	Much
3.3 Variability	58.3 - 4	Much	50.0 - 3	Much
4. Analyzing experimental research data	44.4 - 4	Much	47.2 - 4	Much
4.1 The t-test	44.4 - 4	Much	47.2 - 4	Much
4.2 The Chi-square	52.8 - 4	Much	41.7 - 4	Much
4.3 Using the computer for data analysis	47.2 - 4	Much	38.9 - 4	Much
Conclusion of mode	4	Much	4	Much
Module 8: Reporting, Summarizing, and Interpreting the Results				
1. Reporting and summarizing	39.4 - 4	Much	58.3 - 4	Much
1.1 Quantitative research	61.1 - 4	Much	58.3 - 4	Much
1.2 Qualitative research	58.3 - 4	Much	55.6 - 4	Much
2. Interpreting the results	61.1 - 4	Much	41.7 - 4	Much
2.1 Conclusions	63.9 - 4	Much	44.4 - 4	Much
2.2 Implications	50.0 - 4	Much	52.8 - 4	Much
2.3 Recommendations	55.6 - 4	Much	52.8 - 4	Much
3. Reporting research	38.9 - 4	Much	52.8 - 4	Much
3.1 Types of research	52.8 - 4	Much	58.3 - 4	Much
3.2 The components of the research report	61.1 - 4	Much	58.3 - 4	Much
Conclusion of mode	4	Much	4	Much

Table 15: Results from the assessment of the participants' opinions

From Table 15, the participants' opinions on the difficulty of the contents and their understandings by the percentage of mode could be concluded that:

1) In Module 1, the participants viewed that the difficulty of each topic in the module contents of the ELCR was at the 'moderate' level. It could be said that it was somewhat difficult. However, the participants perceived that their understandings in each topic were at the 'much' level. This meant that they could understand each topic the trainer presented.

2) When considering the results of the participants' opinions by the percentage of mode on the difficulty of each module of the ELCR, the participants perceived that the difficulty in Modules 2, 3, 4, 5, 6, 7 and 8 identically revealed at the 'much' level. This meant the contents of previous modules were difficult for those teachers who took part in this training session. Nevertheless, the participants perceived that they could understand the contents of the English language classroom research at the 'much' level. This also meant that they could learn and understand the presentation of the trainer.

4.4.4 Results from the observations

During the training session on assessing the efficiency of the ELCR model, the researcher also used the observation assessment to assess the efficiency of the ELCR model. Three observers as advised by the researcher had assessed the ELCR model by using the structured observation form accompanied by an open-ended section for any additional comments from the observation. The data gained from the three observers over a two day training period can be concluded as following points:

1) Results from the semi-structured observation form

1.1) The participants were usually enthusiastic to register at the two-day training project in the morning and afternoon before the presentation started. When they took their seats, they looked interested in the training atmosphere. As the opening ceremony went on, they seemed to be more interested in the training president's speech that was about the usefulness of the English language classroom research for the teachers' professionals. After the opening ceremony ended, the trainer's presentation started, and the participants were given the handouts on the ELCR modules to be presented. They participants attentively read the handouts and they looked eager to learn and listen to the trainer while presenting.

1.2) During the trainer's presentation, the participants attentively listened and followed the screen of the presentation. At the same time they followed the texts on the ELCR modules. When the presenter paused or asked questions about the presentation, the participants sometimes asked the other participants besides them. Additionally, they often took notes of points they found of importance whilst listening to the presentation.

1.3) When the trainer asked the participants to share their opinions about the research, they sometimes provided their ideas or opinions about their own experiences.

1.4) Finally, during the presentation the trainees often interrupted to ask questions regarding points that they could not understand clearly about the research or, their previous experiences. If the topic presented seemed to be different from their own previous work, they often asked questions about that point. After receiving their answers, they felt satisfied with the information they obtained from the presenter.

2) The results from the open-ended observation form

The results from three observers using the open-ended form were divided into two points; good and weak points of the training session. The results are concluded as follows:

2.1) Good points of this training session could be concluded that; 1) the participants felt satisfied with the English language training workshop regarding the classroom research; 2) they accepted that the English language classroom research could be helpful with their professional development; 3) the models of English language classroom research, written in English language, were helpful with their language teaching in their schools, and 4) they seemed to be more satisfied with the data analysis using the computer software that the trainer presented to them.

2.2) Weak points could be demonstrated that; 1) the two day training workshop was quite short, 2) there should have been more presenters because the researcher as the only presenter in this workshop, may have made the participants feel bored with the presentation, and 3) in terms of presenting the computer software, some participants with inadequate experiences of using this type of technology may not have been able to follow the presentation.

4.4.5 Results from the semi-structured interview

The last assessment of the efficiency of the English language classroom research model was the semi-structured interview. In collecting the data, three interviews conducted after the training session had completed spending 10 minutes with each interviewee. The interviewer took notes and recorded relevant information to collect the data. The results could be concluded as follows:

1) All participants viewed that the classroom language was very helpful for them, particularly emphasizing on the English language teaching (ELT). This training could support how to conduct the classroom research to develop the teacher professionally according to the policy of the Office of the Basic Education, and the 2002 Basic Education Curriculum. However, in actual situations, teachers of English subject still have not understood clearly the classroom research, emphasizing English subject in the Basic Education.

2) Every participant (as volunteers) in the training session accepted that the English language classroom research was very important for teachers of English working in both the primary and secondary schools. The EELCR model supported the improvement of English language teaching, and a teacher's professional development. This was because to be promoted to higher ranks in the teacher development criterion needed the report of the classroom research to be one of the documents submitted for taking consideration of the Official Teacher Commission.

3) In this teach training session for assessing the efficiency of the ELCR model, the participants accepted that there were adequate materials including handouts and assignments of the ELCR content, the computer software of statistics, and the trainer's presentation. A few participants informed that the ELCR model should have been in Thai language.

4) Eighty percent of interviewees informed that the presentation of each module of the ELCR was quite short and they seemed that the presenter presented in a rather hurried manners. It may be because of many topics on the ELCR modules for presenting. However, the participants asked about what they could not catch up with after the presentation was finished. Finally, they accepted that the training duration

was appropriate because they had limited time for training participation due to the permission of their school administrator.

5) The participants mostly viewed that the training on the classroom research to be very appropriate because it specified on English language learning and teaching especially, the examples of the classroom research cases. They felt that the training was valuable for them but they still were unsure how to start the topic and to continue the classroom research.

6) Additionally, they recommended that there should have been follow-up and advisory session on conducting the classroom research. The trainer or someone who is keen on the classroom research should be the participants' consultant during their classroom research conduct. They also commented that there should have been more real practices about the data analysis by the computer software of simple statistics in the computer room. Lastly, a few participants suggested that the ELCR models should have been in Thai language because English version made them quite confused about the research methods and formally the research was slightly difficult for them.

7) Furthermore, the participants reported that they obtained the classroom research on English language teaching at the much level. They thought that they could name the topics that interested them in the subjects they were teaching, as there were various classroom research topics exemplified in Module 4- 'The development of innovations in English language classroom research. Nevertheless, in actual practices they still worried about the time limit in their work places and statistical technique of using computer software for analyzing data.

8) Finally, most interviewees reported that they could start their classroom research at their schools. They would attempt to identify the topics that were of use to

hem by focusing the problematic language skills the students encountered. They would try to adopt the language teaching innovations they had learnt during the training. Some participants who had completed the classroom research prior to the training could identify the correct or appropriate methods to improve their classroom research. But a few of them reported that they could not decide to choose the topics or continue conducting the classroom research.

To achieve in conducting the classroom research, the interviewees recommended the following conditions:

a) They should continually received assistance from the expert teachers or researchers in education and language teaching. The consultation should include how to entitle the research topics and purposes, write up each chapter, and construct research instruments, data analysis, and composing the full paper of the research.

b) There should be specialists who are expertise teachers or researchers for checking overall research instruments used actual classroom research.

c) The school administrators should intentionally encourage conducting the classroom research for promoting teachers' higher rank positions by devoting enough time and materials in schools.

In conclusion, from this phase of assessing the ELCR model, it could be indicated that every module had appropriate efficiency. That is to say:

1) Firstly, the test item of the pre- and post-tests were analyzed, and found that the p-value and r-value of 41 items were appropriate, while the p- value and r-value of 13 items were quite difficult, and the other 4 items were quite easy. Then, the researcher improved the items and undertook re-testing with the same subject group. Ultimately every improved item resulted an appropriate reading.

2) Secondly the assessment of the effectiveness of the ELCR model with the E1/E2 formula with the ‘one to one’, ‘small group’ and ‘the experimental assessment of the larger group’ were revealed higher than the expected value of 75/75

3) Thirdly, the results from assessing the ELCR model of every module revealed that the trainees or participants expressed and rated their opinions on the difficulty of ELCR model at the 3-4 levels which were met a ‘moderate’ and ‘difficult’. And their understandings of the ELCR model presentation, revealed ‘4 or much’ level.

4) Lastly, the assessment from the semi-structured observations and interviews were conducted and concluded that the participants were very enthusiastic and attentive in conducting all activities in each module. The participants also perceived that the English language classroom research was very valuable for English language learning and teaching. Nevertheless, they felt that the English content of the ELCR model was quite difficult. If they had to conduct a classroom research, they required assistance of the school administrators and the support of expertise supervisors to closely help them design their classroom research.

4.5 The Results of Phase 5 – Conducting the trial run of the English Language Classroom Research Model

In this phase, the results were derived from organizing the training workshop to trial the efficiency of the English language classroom research model with 55 English teachers working under the jurisdiction of Chaiyaphum Educational Service Area Office 2. The instruments proved to be efficient were obtained from Phase 4— assessing the instrument efficiency. The results included 3 parts; 1) comparing the

difference between the pre- and post-test scores before and after the training session by using the t-test, 2) interpreting the scores of opinion assessment after each ELCR module, 3) presenting the results from the semi-structured interview, and 4) presenting the results from the semi-structured observations. The presentations are as follows:

4.5.1) The result of comparing the difference between the pre- and post-test scores

The result from comparing the difference of the pre- and post-test scores before and after the training session by using the t-test is shown in Table 16:

Pair-sample	Mean (Total=60 scores)	N	Std. Deviation	t-value
Post-test	24.0556	54	0.62803	11.015**
Pre-test	18.2778	54	0.67314	

**** Significant level of $p < 0.01$**

Table 16: The difference between pre- and post-tests scores by the t-test

Table 16 indicates that the scores of the pre-test before the training session were different from the post-test scores after the training session. It is shown that the post-test scores were significantly higher than the pre-test scores at the 0.01 level.

4.5.2 The results of the participants' opinion assessment

The results of the participants' opinion assessment were obtained from the training session after presenting each ELCR module. The participants rated the questionnaires in terms of 1) the difficulty of the ELCR model they perceived, 2) their understandings on the presentation and the ELCR contents and 3) additional results from the open-ended part. The three assessing parts indicate the result of this trial phase as the following details:

The results were illustrated by using the mode level of highest percentage in the content lists, interpreted as in Table 17.

Module 1: Identifying Background Knowledge of ELCR				
Item content lists	Content Difficulty		Understandings	
	Highest % of mode-Level	Meaning	Highest % of mode-Level	Meaning
1. Definition	47.3 - 4	Moderate	52.7 - 3	Moderate
2. Scope	41.8 - 4	Much	54.5 - 3	Moderate
3. Value	47.3 - 4	Much	47.3 - 3	Moderate
4. Characteristics	40.0 - 3	Moderate	41.8 - 3	Moderate
5. Process	47.3 - 4	Much	45.5 - 4	Much
6. Limitation	32.7 - 3	Moderate	47.3 - 3	Moderate
7. The handouts of the content knowledge	41.8 - 3	Moderate	54.5 - 3	Moderate
8. The trainer's explanation	40.0 - 3	Moderate	45.5 - 3	Moderate
Conclusion of mode	3	Moderate	3	Moderate
Module 2: Basic Elements of ELCR				
1. Major issues	48.4 - 4	Much	50.0 - 3	Moderate
2. Evaluating and developing research problems	-----	-----	-----	-----
2.1 What are the problems?	46.3 - 4	Much	51.9 - 4	Much
2.2 Selecting problem issues	42.3 - 4	Much	40.7 - 4	Much
2.3 Considering issues	50.0 - 4	Much	42.6 - 3	Moderate
2.4 Developing CR questions	59.3 - 4	Much	44.4 - 3	Moderate
3. Variables of the research	40.7 - 4	Much	42.6 - 3	Moderate
4. Hypotheses	40.7 - 3	Moderate	33.3 - 3	Moderate
5. The handouts of the content	44.4 - 3	Moderate	42.6 - 3	Moderate
6. The trainer's procedures of presentation	48.1 - 3	Moderate	42.6 - 3	Moderate
Conclusion of mode	4	Much	3	Moderate
Module 3: Review of Related Literature in Language Classroom Research				
1. Definition	44.4 - 4	Much	55.6 - 3	Moderate
2. Scope	50.0 - 4	Much	46.3 - 3	Moderate
3. Values	46.3 - 4	Much	46.3 - 3	Moderate
4. Characteristics	46.3 - 3	Moderate	42.6 - 3	Moderate
5. Process	46.3 - 4	Much	40.7 - 3	Moderate
6. Limitation	42.6 - 3	Much	46.3 - 3	Moderate
7. The handouts of the content	44.4 - 4	Much	46.3 - 3	Moderate
8. The trainer's explanation	48.1 - 4	Much	50.0 - 3	Moderate
Conclusion of mode	4	Much	3	Much
Module 4: Innovation Development in ELCR				
1. Definition and characteristics	44.4 - 4	Much	48.1 - 4	Much
2. Category of innovations	51.9 - 4	Much	42.6 - 4	Much
2.1 innovations of instruction and	44.4 - 3	Moderate	51.9 - 3	Moderate

teacher talk				
1) Teaching material innovations	44.4 - 4	Much	55.6 - 3	Moderate
2) Teaching and learning process innovations	37.0 - 3	Moderate	64.8 - 3	Moderate
2.2 Innovation development of learner behavior and interaction	48.1 - 3	Moderate	51.9 - 3	Moderate
3. The role and development of instructional innovations	42.6 - 3	Moderate	50.0 - 3	Moderate
3.1 The role	48.1 - 4	Much	50.0 - 3	Moderate
3.2 The development	50.0 - 4	Much	50.0 - 3	Moderate
3.3 Procedures	46.3 - 4	Much	51.9 - 3	Moderate
Module 4: Innovation Development in ELCR				
4. Example cases of innovation development	40.7 - 4	Much	50.0 - 3	Moderate
Conclusion of mode	4	Much	3	Moderate
Module 5: Designing ELCR				
1. Quantitative research: Experimental design	-----	-----	-----	-----
1.2 Definition and major components	51.9 - 4	Much	42.6 - 3	Moderate
1.2 Research designs	55.6 - 4	Much	44.4 - 3	
2. Qualitative research	-----	-----	-----	-----
2.1 Definition and major characteristics	50.0 - 4	Much	38.9 - 3	Moderate
2.2 Why do we need to do qualitative research?	55.6 - 4	Much	48.1 - 3	Moderate
2.3 Conducting a qualitative inquiry	50.0 - 4	Much	55.6 - 3	Moderate
1) Heuristic or hypothesis generating	48.1 - 4	Much	59.3 - 3	Moderate
2) Deductive or hypothesis testing	40.7 - 3	Moderate	57.4 - 3	Moderate
3) Procedures of conducting	42.6 - 4	Much	53.7 - 3	Moderate
4) The uses of qualitative research	50.0 - 3	Much	57.4 - 3	Moderate
5) The problems of non-participants observations	48.1 - 3	Much	50.0 - 3	Moderate
Conclusion of mode	4	Much	3	Moderate
Module 6: Collecting Data in ELCR				
1. Determining what constitute data	42.6 - 4	Much	55.6 - 3	Moderate
2. Procedures in quantitative research	55.6 - 4	Much	53.7 - 3	Moderate
3. Description of data collection procedures	46.3 - 3	Moderate	53.7 - 3	Moderate
4. Procedures in qualitative and quantitative research typical uses	50.0 - 4	Much	40.7 - 4	Much
4.1 Interviews	44.4 - 4	Much	48.1 - 4	Much
4.2 Record reviews	44.4 - 3	Moderate	44.4 - 3	Moderate
4.3 Diaries	55.6 - 3	Moderate	48.1 - 3	Moderate
4.4 Observations	51.9 - 3	Moderate	53.7 - 3	Moderate
4.5 Verbal reporting	61.1 - 3	Moderate	57.4 - 3	Moderate
4.6 Questionnaires	48.1 - 3	Moderate	50.0 - 3	Moderate
4.7 Tests	55.6 - 3	Moderate	50.0 - 3	Moderate
5. Issues and problems in	46.3 - 4	Much	40.7 - 4	Moderate

collecting language data				
6. Assuring the quality of the data and data collection procedures	40.7 - 4	Much	51.9 - 3	Moderate
6.1 Reliability	48.1 - 4	Much	53.7 - 3	Moderate
6.2 Validity	46.3 - 4	Much	55.6 - 3	Moderate
Conclusion of mode	4	Much	3	Moderate
Module 7: Analyzing Data through ELCR				
1. Data analysis and the design of the study	53.7 - 4	Much	57.4 - 3	Moderate
2. Analyzing quantitative data	50.0 - 4	Much	61.1 - 3	Moderate
3. Analyzing descriptive data	48.1 - 4	Much	57.4 - 3	Moderate
3.1 Frequencies	51.9 - 3	Moderate	48.1 - 3	Moderate
Conclusion of mode	4	Much	3	Moderate
Module 7: Analyzing Data through ELCR				
3.2 Central tendency measures	44.4 - 3	Moderate	55.6 - 3	Moderate
3.3 Variability	44.4 - 3	Moderate	50.0 - 3	Moderate
4. Analyzing experimental research data	55.6 - 3	Moderate	55.6 - 3	Moderate
4.1 The t-test	53.7 - 3	Moderate	48.1 - 3	Moderate
4.2 The Chi-square	50.0 - 3	Moderate	50.0 - 3	Moderate
4.3 Using the computer for data analysis	51.9 - 3	Moderate	51.9 - 3	Moderate
Conclusion of mode	3	Moderate	3	Moderate
Module 8: Reporting, Summarizing, and Interpreting the Results				
1. Reporting and summarizing	42.6 - 3	Moderate	40.7 - 3	Moderate
1.1 Quantitative research	44.4 - 3	Moderate	48.1 - 3	Moderate
1.2 Qualitative research	53.7 - 3	Moderate	46.3 - 3	Moderate
2. Interpreting the results	59.3 - 3	Moderate	40.7 - 3	Moderate
2.1 Conclusions	50.0 - 3	Moderate	40.7 - 3	Moderate
2.2 Implications	48.1 - 3	Moderate	37.0 - 3	Moderate
2.3 Recommendations	48.1 - 3	Moderate	50.0 - 3	Moderate
3. Reporting research	50.0 - 3	Moderate	40.7 - 3	Moderate
3.1 Types of research	50.0 - 3	Moderate	42.6 - 3	Moderate
3.2 Components of the research report	46.3 - 3	Moderate	48.1 - 3	Moderate
Conclusion of mode	3	Moderate	3	Moderate

Table 17: The results from the assessment of the participants' opinions

From Table 17, it can be concluded that:

1) the participants perceived that the content difficulty of the ELCR model in Module 1, 7 and 8, including their understandings were in the “3 level” which meant “somewhat difficult”. They also perceived that they could understand in the “3 or moderate level” or quite well.

2) but for the content difficulty and the participants' understandings in

Module 2, 3, 4, 5 and 6, they revealed at the “3 level” which meant they perceived that those modules were “somewhat difficult” and they could understand the content presentation quite well.

3) additional comments from the open-ended questionnaire could be concluded that; 1) the presentation of each module was a bit fast and that the trainees could not completely understand some of the topics presented, 2) some of the participants were familiar with some research terms used in the ELCR model, and 3) the ELCR contents should have been written in Thai language.

4.5.3 Results from the semi-structured interview

In this assessment for the trial of the English language classroom research model, the semi-structured interview was used in collecting the data. Three interviews conducted after the training session had completed spending 10 minutes with each interviewee. The participants included 15 trainees containing 3 participants from 5 training groups. The interviewer took notes and recorded relevant information to compile the data. The results could be concluded as follows:

1) In terms of the content difficulty of each ELCR module, the informants reported that the ELCR model written in English was rather difficult for them, a long with the classroom research model written in the Thai language. Some trainees previously took part in classroom research once or twice, but they still felt that the classroom research difficult for them. However, in this workshop they could obtain many aspects in English language teaching especially from Module 4--developing innovations. They found that different research case examples could imply how to design the classroom research intended for their teaching processes.

2) In the case of presenting the ELCR model, the informants felt that the presentation was rather fast in some modules particularly Module 7—analyzing the

data through the ELCR. The trainer presented this part in the computer room to exemplify how to analyze the data through the SPSS software program and the test item analysis through the IAS (Item Analysis System) software program. The informants reported that it was quite difficult to determine the research designs for their classroom problem solving because there were too many serious problems in their actual classrooms.

3) Lastly, the informants additionally reported on the present teacher training on the ELCR model that:

3.1) it was very helpful for teachers of English language in every class level, as it focused on the elements of language learning and teaching. This was the initial classroom model for the improvement of English language teachers' professional. The ELCR content in each module pointed out that there were many different methods to design the classroom research for actual problem solving. Moreover, this training workshop encouraged the trainees to develop different types of English classroom innovations for the classroom research, as well as how to use the computer software program for analyzing the basic statistics of the classroom research.

3.2) the informants' comments on the training workshop included the physical characteristics of the ELCR model and the problems occurring during the project. The recommended physical characteristics of the ELCR model were that each module should have been in Thai language because the participants felt that they could not completely understand the contents of the ELCR. Naturally, the classroom researches are rather complicated for doing in actual learning and teaching situations.

However, the ELCR model was still very helpful because the participants themselves could enhance their English skills especially English for academic purposes.

3.3) the informants commented that the training duration should have been longer, as there should have been additional practices in cooperative designing the classroom research among the training member groups. In addition to this, the trainees should have had more chances to practice analyzing data in the computer room as that is necessary for actual research conduct in a teacher's workplace.

4.5.4 Results from the semi-structured observation

This assessment was conducted during training for collecting the data of the trial of the curriculum in Phase 5. The semi-structured observation included the participants' behaviors before, during and after the two-day training workshop observed by three observers--2 assistants and the researcher himself. Observers' comments were categorized into good and weak points. The results can be summarized as follows:

1) When the English teachers as the training volunteers received the official letters for the invitation to the training project through the E-Office, they asked for the principal's permission and enthusiastically called to the register with the project secretary.

2) On the first day of training, the participants seemed to be very enthusiastic in registering and taking part in the training. The number of the trainees was higher than the expected number of 54. After they received the handouts on the ELCR contents, they took the seats and read the handouts eagerly waiting for the opening ceremony and training presentation.

3) During the pre-test, the participants looked quite frustrated at having to undertake the test and the results they would produce. The researcher suggested they not worry about the results. After they completed the pre-test, some of the participants complained that it was so hard that they might not get 'good marks' and they felt worried.

4) During the presentation, the participants appeared to be attentive to the ELCR contents, written in English which was the first time they would train. After presenting Module 4, the trainer had them get into a group of 5 or 6, and allowed them to consider about a research topic. Each group was interested to construct a classroom research proposal. The groups worked for approximately thirty minutes and submitted proposal to the trainer for commenting.

5) The researcher felt that the participants looked worried about their research topics. However, after the trainer's comments, they appeared more relaxed and confident in conducting the classroom research. Each trainee appeared motivated to conduct the classroom research, and began to ask questions regarding different elements to support their classroom research proposals.

6) On the second day of training, some participants were absent from the training session but the number was still sufficient for the trial of the ELCR curriculum. The workshop continued as per the first day, and the observers could identify more of the participants' interests in the training workshop. They continued to actively participate in the training activities that encouraged them to conduct the classroom research. Finally, the participants were able to learn about the data analysis in the computer room and practice using the IAS for the test item analysis and the SPSS software package for the statistical techniques. At this point they appeared more

interested in completing the training course. They requested assistance from the assistant researchers to practice operating the computerized soft wares.

7) From the semi-structured observations, it can be concluded that the participants taking part in the English language classroom research were very interested in the training workshop because of the research field they occupied in their workplaces. In contrast, it could be seen that some of them looked discouraged in training and conducting the classroom research, especially while taking the post-test. After the session ended, the participants looked satisfactory on the training session and what they had achieved during the training project. They asked for their scores for both the pre- and post-tests. The trainer advised them that these would be sent by letter to their workplaces.

In conclusion, Phase 5 -- Trialing the ELCR model, the results were that: 1) the participants' achievements in learning were successful due to the significantly higher scores of the post-test than of the pre-test at the 0.01 level; 2) the participants perceived the ELCR model in every module were quite difficult in terms of the language use; 3) the participants also perceived that they could understand on presenting the module at the "moderate" level; 4) the –semi-structured interview indicated that they felt satisfied with the training session on the ELCR model, but the ELCR contents seemed quite difficult for them. They reported that they could conduct the classroom research provided that they have supervisors and the school administrators support and encouragement of them undertaking the research, and eventually, and 5) the semi-structured observations indicated that the participants were very enthusiastic, willing to take part in the training workshop and participating in activities; whilst they felt worried and frustrated in actual practices in their

workplaces. Their behaviors implied that they felt satisfactory and hopeful towards the coming classroom research for their professional development.

4.6 The Results of Phase 6: Evaluating the Teacher Training Project by the English language classroom research model

This section discusses the results of Phase 6: Evaluating the project of the English language classroom research model conducted after completing Phase 4 and Phase 5. It includes 3 evaluative parts: 1) the efficiency analysis of the evaluation form, 2) the project evaluation of the training session in Phase 4; and 3) the project evaluation of the training session in Phase 5.

4.6.1 The item efficiency analysis of the evaluation form

The evaluation form here was in the format of the five rating scaled questionnaire of satisfactory level or appropriateness accompanied by the open-ended part for free comment writing of the participants. The questionnaire content included the applied model of Kirkpatrick's model (Fetterman and Eiler, 2001) integrated with Dick, Carey and Carey's (2001) model as stated in Chapter 3. The domains for evaluating the training project comprised; 1) Participants' reactions included the questions, No. 1 – 7; 2) Participants' learning outcomes included the questions, No. 8 – 12; 3) Participants' behaviors included the questions, No. 13 – 18. 4) Project results included the questions; No. 19 – 23; and 5) Language proficiency improvement included the questions, No. 24 – 30.

This item efficiency analysis of the questionnaire was to prove and select the questionnaire items with the participants' opinions of high-scored group (of the upper percentile 75th) and low-scored group (of the lower 25th percentile 25). The two

scored groups were then tested by the t-test technique at the 0.05 significant levels.

The results were shown in Table 18:

Domains	No	Statements	Sequences	t-value	Sig.(2-tails)
Participants' reactions	1	Satisfied with the teacher training project on language classroom research.	9	5.942	.000*
	2	This training project was helpful with you and teachers of English.	1	8.656	.000*
	3	Organizing this training was valuable for joining the training.	11	5.778	.000*
	4	The place light sound and atmosphere in training.	12	5.646	.000*
	5	Activities and the contents in the schedule.	15	5.150	.000*
	6	The training documents, media and activities.	6	6.335	.000*
	7	Procedures in training presentation	16	4.903	.000*
Participants' learning outcomes	8	Understood and learned the content of the background knowledge of English language classroom research and the study of related literature.	21	3.629	.001*
	9	Obtained the knowledge on innovation development on language classroom research.	17	4.574	.000*
	10	Learned and understood on the research design and constructing instruments for collecting data.	13	5.471	.000*
	11	Learned and understood on data analysis and writing research reports.	27	2.678	.011*
	12	Learned and understood the whole picture of research processes.	20	3.943	.000*
Participants' behaviors	13	Be able to apply the knowledge of English language classroom research to actually practice in learning and teaching.	23	3.240	.003*
	14	How to search data source contents theory and related research for language classroom research.	3	7.775	.000*
	15	Be able to design the classroom research.	27	2.678	.011*
	16	Be able to construct the instruments for collecting data for the research conducted.	30	2.166	.037*
	17	Be able to analyze the data and write the research report.	26	3.005	.005*
	18	Be able to adopt the knowledge on classroom research for actual practices in schools.	14	5.316	.000*
Project results	19	This training session was worthy and affected to good points for improving learning and teaching English according to the core curriculum.	7	6.132	.000*
	20	This training course provided the knowledge and enabling the application for English language teachers to improve students' abilities.	4	7.049	.000*
	21	The training course was traceable for improving English teachers' professional.	5	6.748	.000*
	22	This training session was worthy investment for the improvement of English learning and teaching.	2	8.246	.000*
	23	This training session was relevant to the trend in the promotional development of the present professional advancement.	8	6.060	.000*
Language proficiency	24	Understood the language used in the pre- and post-tests.	29	2.711	.010*
	25	Understood the language used in module content.	24	3.154	.003*

26	Understood the language used in the media and documents presented.	18	4.546	.000*
27	Gained the knowledge on vocabularies related to the language in various module contents.	10	5.920	.000*
28	This training session enabled the improvement of reading and writing skills.	25	3.054	.004*
29	This training session enabled the improvement of listening and speaking English.	22	3.411	.002*
30	Gained the language knowledge on the classroom research.	19	4.096	.000*

* Significant level of $p < 0.05$

Table 18: The result of the item efficiency analysis of the evaluation form

Table 18 implied the result of the item efficiency analysis concluded as:

1) Each item of the questionnaire for evaluating the training project was proven effective because each one in the five overall domains had different opinion level between the low- and high scored groups proved by the t-test.

2) The respondents commented that with the language used in the questionnaire (written in Thai language) they could understand exactly what to answer regarding the training session.

3) From the proofs of three specialists, it was accepted that the efficiency of questionnaire for the training evaluation was appropriate for the purpose of the project.

4) Besides the validity efficiency of the questionnaire by the prior method, the reliability efficiency was proven by the Alpha Cronbach using the scores rated by 36 subjects in Phase 4. The alpha value revealed the co-efficient alpha of 0.967. This meant that the questionnaire could predict the participants' behaviors in the training session at around 90%.

4.6.2 The result of the training project evaluation: session 1 - assessing the English language classroom research model

This section presents evaluation of the English language classroom research on Phase 4 - assessing the efficiency of the model. The results obtained from 36 subjects rated the questionnaires in this phase were demonstrated in five evaluative domains analyzed by using the highest mode of the percentage shown in Table 19:

Domains	No	Statements	Highest %	Level	Meaning
<i>Participants' reactions</i>	1	Satisfied with the teacher training project on language classroom research	41.7	4	Much
	2	This training project was helpful with you and teachers of English.	38.9	4	Much
	3	Organizing this training was valuable for joining the training	44.4	4	Much
	4	The place of light, sound and atmosphere in training.	33.3	4	Much
	5	Activities and the contents in the schedule	47.2	4	Much
	6	The training documents, media and activities	44.4	4	Much
	7	Procedures in training presentation	41.7	4	Much
	Conclusion of evaluation			-	4	Much
<i>Participants' learning outcomes</i>	8	Understood and learned the content of the background knowledge of and the study of related literature	41.7	3	Moderate
	9	Obtained the knowledge on innovation development on English language classroom research	36.1	4	Much
	10	Learned and understood on the research design and constructing instruments for collecting data.	33.3	4	Much
	11	Learned and understood on data analysis and writing research reports.	41.7	3	Moderate
	12	Learned and understood the whole picture of research processes.	36.1	4	Much
	Conclusion of evaluation			-	4	Much
<i>Participants' behaviors</i>	13	Be able to apply the knowledge of English language classroom research to actually practice in learning and teaching.	38.9	4	Much
	14	How to search data source contents theory and related research for language classroom research.	50.0	4	Much
	15	Be able to design the classroom research.	47.2	4	Much
	16	Be able to construct the instruments for collecting data for the research conducted.	47.2	3	Moderate
	17	Be able to analyze the data and write the research report	50.0	3	Moderate
	18	Be able to adopt the knowledge on classroom research for actual practices in schools.	47.2	4	Much
	Conclusion of evaluation			-	4	Much

<i>Project results</i>	19	This training session was worthy and affected to good points for improving learning and teaching English according to the core curriculum.	38.9	4	Much
	20	This training course provided the knowledge and enabling the application for English language teachers to improve students' abilities.	44.4	4	Much
	21	The training course was traceable for improving English teachers' professional.	38.9	4	Much
	23	This training session was relevant to the trend in the promotional development of the present professional advancement.	36.1	5	Very much
	Conclusion of evaluation			-	4	Much

<i>Language proficiency improvement</i>	24	Understood the language used in the pre- and post-tests.	36.1	3	Moderate
	25	Understood the language used in each module contents.	44.4	3	Moderate
	26	Understood the language used in the media and documents presented.	41.7	4	Much
	27	Gained the knowledge on vocabularies related to the language in various module contents.	44.4	4	Much
	28	This training session enabled the improvement of reading and writing skills.	41.7	4	Much
	29	This training session enabled the improvement of listening and speaking English.	36.1	4	Much
	30	Gained the language knowledge on the classroom research.	30.6	4	Much
	Conclusion of evaluation			-	4	Much

Table 19: The result of the training project evaluation from Phase 4

Table 19 could indicate that the evaluative result of the training project of each domain pointed out as the followings:

1) Participants' reactions towards the training project covered the satisfaction, value, and different components organizing the training project in each statement revealed the highest mode percentage at the "much" level.

2) Participants' learning outcomes from the training project followed to their perceptions on being able to understand the knowledge presented and to design the

English language classroom research were found at the highest mode percentage between the “moderate” and “much” levels.

Furthermore, in terms of the learning outcomes of the training project, the result from comparing the difference of the pre- and post-test scores before and after the training session by using the t-test is also presented as shown in Table 20:

Pair-sample	Mean (Total=61 scores)	N	Std. Deviation	t-value
Post-test	42.619	36	3.759	
Pre-test	19.916	36	4.331	45.783**

**** Significant level of $p < 0.01$**

Table 20: The difference between pre- and post-tests scores by the t-test

Except from the evaluation by the questionnaire, Table 20 indicates that the participants’ learning outcomes illustrated by the scores of the pre-test before the training session were different from the post-test scores after the training session. So, it is shown that the post-test scores were significantly higher than the pre-test scores at the 0.01 level.

3) In the evaluative domain of the participants’ behaviors including how to adopt and apply the ELCR content knowledge for actual practices they perceived, revealed the highest mode percentage between the “moderate” and “much” levels.

4) The evaluative domain of the training project results was presented. This domain included mainly the trainees’ enabling to apply the ELCR for actual practices. The results from the participants’ perceptions revealed the highest mode percentage at the “much” and “very much” levels.

5) Additionally, the domain of language proficiency improvement was evaluated in terms of the participants’ language improvements derived from the

training project. The perceptive results from the questionnaire revealed the highest mode percentage at the “moderate” and “much” levels.

To summarize the above presentation of the five evaluative domains, the results imply that the participants’ perceptions for the project evaluation were among the “moderate”, “much” and “very much” levels. This concludes that the training project on the ELCR were worthy and efficient for English language teachers’ improvements in terms of the classroom research proficiency skill.

4.6.3 The result of the training project evaluation: session 2 for trialing the English language classroom research

This section presents the evaluation of the training project of the English language classroom research in Phase 5. The results obtained from 50 subjects in this phase are demonstrated in five evaluative domains as the prior evaluation analyzed by using the highest mode of the percentage shown in Table 21:

Domains	No	Statements	Highest %	Level	Meaning
<i>Participants' reactions</i>	1	Satisfied with the teacher training project on language classroom research	51.9	4	Much
	2	This training project was helpful with you and teachers of English.	53.7	4	Much
	3	Organizing this training was valuable for joining the training	53.7	4	Much
	4	The place of light, sound and atmosphere in training	48.1	4	Much
	5	Activities and the contents in the schedule	53.7	4	Much
	6	The training documents, media and activities	44.4	4	Much
	7	Procedures in training presentation	55.6	4	Much
		Conclusion of evaluation	-	4	Much
<i>Participants' learning outcomes</i>	8	Understood and learned the content of the background knowledge of English language classroom research and the study of related literature	42.6	3	Moderate
	9	Obtained the knowledge on innovation development on English language classroom research	46.3	4	Much
	10	Learned and understood on the research design and constructing instruments for collecting data.	38.9	4	Much

	11	Learned and understood on data analysis and writing research reports.	42.6	3	Moderate
	12	Learned and understood the whole picture of research processes.	44.4	4	Much
	Conclusion of evaluation		-	4	Much
<i>Participants' behaviors</i>	13	Be able to apply the knowledge of English language classroom research to actually practice in learning and teaching.	40.7	4	Much
	14	How to search data source contents theory and related research for language classroom research.	50.0	4	Much
	15	Be able to design the classroom research.	51.9	3	Moderate
	16	Be able to construct the instruments for collecting data for the research conducted.	55.6	3	Moderate
	17	Be able to analyze the data and write the research report	50.0	4	Much
	18	Be able to adopt the knowledge on classroom research for actual practices in schools.	55.6	4	Much
	Conclusion of evaluation		-	4	Much
<i>Project results</i>	19	This training session was worthy and affected to good points for improving learning and teaching English according to the core curriculum.	46.3	4	Much
	20	This training course provided the knowledge and enabling the application for English language teachers to improve students' abilities.	53.7	4	Much
	21	The training course was traceable for improving English teachers' professional.	46.3	4	Much
	22	This training session was worthy investment for the improvement of English learning and teaching.	50.0	4	Much
	23	This training session was relevant to the trend in the promotional development of the present professional advancement.	46.3	4	Much
	Conclusion of evaluation		-	4	Much
<i>Language proficiency improvement</i>	24	Understood the language used in the pre- and post-tests.	40.7	4	Much
	25	Understood the language used in each module contents.	42.6	3	Moderate
	26	Understood the language used in the media and documents presented.	48.1	4	Much
	27	Gained the knowledge on vocabularies related to the language in various module contents.	50.0	4	Much
	28	This training session enabled the improvement of reading and writing skills.	53.7	4	Much
	29	This training session enabled the improvement of listening and speaking English.	50.0	4	Much
	30	Gained the language knowledge on the classroom research.	46.3	4	Much
	Conclusion of evaluation		-	4	Much

Table 21: The result of the training project evaluation from Phase 5

The table showed that the evaluative result of the training project of each domain presented the following aspects:

1) Participants' reactions towards the training project covered the satisfaction, value, and varying components organizing the training project in each statement revealed the highest mode percentage at the "much" level.

2) Participants' learning outcomes from the training project followed to their perceptions on being able to understand the knowledge presented and design the English language classroom research revealed the highest mode percentage between the "moderate" and "much" levels.

In the aspect of the learning outcomes of the training project, the result from comparing the difference of the pre- and post-test scores before and after the training session by using the t-test is also presented as shown in Table 16 of Phase 5 -Trial the ELCR model. It indicated that the participants' learning outcomes illustrated by the pre- test scores before the training session were different from the post-test scores after the training session. So, it is shown that the post-test scores were significantly higher than the pre-test scores at the 0.01 level.

3) In the evaluative domain of the participants' behaviors including how to adopt and apply the ELCR content knowledge for actual practices they perceived revealed the highest mode percentage between the "moderate" and "much" levels.

4) The evaluative domain of the training project results were evaluated and could be presented. This domain mainly included the worth, values and enabling trainees to apply the ELCR for actual practices. The results from the participants' perceptions revealed the highest mode percentage at the "much" level.

5) Additionally, the domain of language proficiency improvement was also evaluated in terms of the participants' language improvements. The perceptive results

from the questionnaire revealed the highest mode percentage at the “moderate” and “much” levels.

4.6.4 The evaluative results from the questionnaire in the open-ended part

Besides the responses from rating-scaled questionnaires, some participants expressed additional opinions on the training project session 1 in Phase 4 and session in Phase 5 conclusively which is presented as follows:

1) Around 28% of the participants’ main problems included: 1) English language and the difficulty of the language used in the handouts provided during training; 2) the noisy students around the meeting room which was rather widely open (especially during the training session 1), and 3) the time limit and speed of presentation in the training session.

2) Approximately 29% of the participants’ suggestions included: 1) late informing the training project to the schools, 2) ELCR contents being too many contents and the translation of the handouts, 3) providing a longer training duration, 4) slowing down the speed of presentation, and 5) training or following up the actual research practices.

4.6.5 The evaluative results of the training project session 1 and 2 from the semi-structured observations and the participants’ self-reports

This section discusses and presents the evaluative results during the training project of both 2 sessions in Phase 4 and Phase 5 as per prior discussions. The assessing instruments contained the semi-structured observations and the participants’ self-reports after each training project. The results from the semi-structured interview have been presented earlier in the final parts of Phase 4 and 5. For this evaluation, the results intended to express were obtained from the meeting of the teachers’ network

aimed to continue conducting the classroom research after the two training sessions.

The results gained comprised the subsequent issues:

1) The results from the semi-structured observations

1.1) After Phases 4 and 5, 21 teachers volunteered to participate in the network meeting after each training session. On the actual day of the meeting (in the ERIC Center organized by the researcher) only four teachers from Phase 4 training and six teachers from Phase 5 attended.

1.2) The volunteers came enthusiastically to the meeting and arrived on time. At this casual meeting they discussed the topic of the classroom research as they could not determine the language skills they would like to select for the topics. They commented to the researcher, that there were too many other issues occurring in the students' classrooms.

1.3) After the researcher proposed some examples of the classroom research to the meeting participants, they appeared to be more optimistic and confident to determine the language skills for classroom research topics derived from the problems they found in their classrooms. They discussed the research issues with the researcher, the research assistants, and the other participants.

1.4) After the meeting's discussions, and the participants had finally determined the classroom research topics, so the researcher assigned them to write up the research questions as per the ELCR model presented in the training session. Whilst observing, the researcher found that some of the participants had written the research topics and questions to discuss in the meeting. After discussing the topics and questions, the participants then wrote their expected real topics and questions to propose the researcher and the assistants for approval. They felt satisfied and

confident to continue their classroom research. The researcher suggested they write up the research proposal to put forward to their school principals. The researcher then guided them to create appropriate instruments for the classroom research and set a date for the next meeting. The left meeting concluded after discussing the next step for the participants and addressing other topics of the meeting's agenda.

2) The evaluative results from the participants' self-reports

This part presents the participants' self-reports and feedbacks after two training sessions in Phase 4 and 5. The researcher obtained a report from some of the participants as to what they had learnt during the training. After completing the presentation, five trainees in Phase 4 and seven trainees in Phase 5 from each district area were invited to provide feedback about the ELCR training to the researcher and his assistants. Each trainee was assigned to report within five minutes. The results they reported could be summarized in the subsequent points:

2.1) In response to the main objective of the ELCR model training, the informants reported that the training course had been enhanced it specified major objectives of the currently basic curriculum, in language learning and teaching. The ELCR model appeared to have been updated, and was more helpful in the new era of language learning, especially in the area of solving issues in actual classrooms. Before joining the project, the informants thought the training might resemble the previous trainings they had taken part in which were for every teacher and teaching subject not just English language teaching.

2.2) In terms of the content difficulty, the ELCR model seemed more difficult and complicated because of the English language used in the model. Actually, the classroom research contents were quite difficult for teachers' real

practices, so the English version seemed more difficult due to the unfamiliar research terms. However, in this training the researcher attempted to exemplify enough classroom research abstracts to support the participants' ideas to make up the new classroom research they required. This technique could help learning about the classroom research as well as the English language improvement for teachers in academic research terms.

2.3) For the presentation of each module, the informants reported that the presenter presented quite quickly because of the training time limit. Nevertheless, the participants received sufficient ELCR handouts that encouraged them to follow the presentation. For the presentation of analyzing the data by the computer software in Phase 4, the informants commented that they should have really practiced in the computer room. However, they assumed that they could be able to practice by themselves as they had received the software program as the part of the training project, and accompanied with their prior computer experiences.

2.4) For actual classroom research practices in schools, the participants reported that they would conduct their future research due to the teachers' official regulations for professional development to be promoted higher positions. They reported that it was too complicated to decide to conduct a classroom research effectively. They finally commented that if they decided to do the classroom research, they would ask for help from the researcher to assist with checking the research appropriateness, feasibilities, creation of the research instruments, and writing up the reports. They would attempt to conduct the classroom research practices, even though the research was difficult and there was at the time a lot of school work. Finally, they

could fulfill their future classroom research if they received support from their schools and researchers.

To summarize the above discussions of five evaluative domains, the results from the questionnaires could imply that the participants' perceptions of the project evaluation were among the "moderate", and "much" levels. This could be concluded that the training project on the ELCR were quite difficult for trainees but worthy and efficient for English language teachers' improvements in terms of the classroom research proficiency skill. Finally, the results from the semi-structured observations and the participants' self reports could also be assumed that the participants were quite enthusiastic and willing to take part the training project since they felt that the ELCR was an innovative model, worthy and helpful for English teachers. They commented that this research model was quite difficult but effective and helpful for English language teachers' classroom research practices in the real school situations. The participants additionally recommended that there should have been follow-ups and support from the research specialists and encouragements from the schools or principals. so that they could achieve their classroom research for professional development. .

4.7 The Results of Phase 7: Finalizing the language classroom research model

This phase aimed to finalize the English language classroom research model after assessing and trialing the model. The procedure included verifying the model in order to prove its efficiency in terms of adopting for real practices by the method of action research as Nunan's (1989, 12-13) the following steps:

4.7.1 Planning – Developing a plan of the action to improve what is already happening.

The researcher undertook the training during in Phase 4, during November 24–26, 2005 and Phase 5 training during December 22-23, 2005. The trainer team informed the trainees to voluntarily apply for the project network of the classroom research conduct. The participants who agreed to take part the project network comprised the volunteers in planning the actual research practices as follows:

The project volunteers as the applicants from Phase 4 included 8 teachers (from overall 36 subjects) and more applicants from Phase 5 included 13 teachers (from overall 54 subjects). Those volunteers intended to take part in the next step of the research network. Their names and school workplaces were respectively shown in Table 22 as follows.

Applicants from Phase 4 training		
No.	Names-surnames	Schools
1	Ms. Buppha Namwijit	Ban Lardyai School
2	Ms. Nartruedee Yensiri	Nonsrisa-ngar School
3	Ms. Rotjana Sairut	Nongpaiwittayanusorn School
4	Ms. Suppaluk Thuaenphachin	Khoo-muangwittaya School
5	Mrs. Napaporn Promdaeng	Kudhooling School
6	Mr. Thawat Somarboot	Saharatnukho School
7	Mrs. Rattanaporn Wichitsriwara	Muangpayalaewittaya School
8	Ms. Phummarin Tosakul	Ban Chee-longtai School
Conclusion		
**	Percentage of applicants	22.22% of overall Phase 4 trainees
<i>Sex</i>	<i>Male, 1 =/ 12.5%</i>	<i>Female, 7 = 87.5%</i>
Applicants from Phase 5 training		
1	Mr. Anirut Mooharn	Kaengkrowittaya School
2	Mrs. Nittaya Thorat	Kaengkrowittaya School
3	Mrs. Pornpan Treethanya	Kaengkrowittaya School
4	Ms. Naiyanet Naen-udorn	Kaengkrowittaya School
5	Mrs. Nipaporn Promchai	Kaengkrowittaya School
6	Mr. Boonlee Chernchaiyaphum	Kaengkrowittaya School
7	Mr. Chalom Tosri	Chumchonbanhuayyang School
8	Ms. Chadaporn Chamnarnmomt	Khonsarnwittayakom School
9	Mr. Sriwan Tooyta	Banhunwittaya School

10	Mrs. Sutassanee Thanasakpoonchai	Banhunwittaya School
11	Ms. Phatareeya Promhiang	Ban Nongpai School
12	Mrs. Siriporn Muthaporn	Ban Nonhinlad School
13	Mrs. Chaemchoi Silasoongnern	Ban Daengsawang School
Conclusion		
**	Percentage of applicants	24.07% of overall Phase 5 trainees
<i>Sex</i>	<i>Male, 4 = 30.76%</i>	<i>Female, 9 = 69.23%</i>

Table 22: Names and workplaces of the applicants

After obtaining the participants from each training phase, the researcher made an appointment that they attended the first meeting on Friday 14 of January, 2006. They received handbooks during training and a list of the research titles based on the English skills they found the problems to discuss in the meeting. One of the remarkable points noted by the researcher was that one of the main reasons teachers could participate in the research network was due to their school workload combining regular teaching with the research and they felt that the classroom research would be difficult for them to complete because of the discouragement from school administrators.

In conclusion, to this step the researcher provided some research documents to the participants such as, the example cases of the research reports, the draft format for writing the classroom research proposal and some of the ELCR model for the informal meeting research network in the coming step.

7.4.2) Acting to implementing the plan

This step aimed to carry out the step of the actual classroom research of the volunteered teachers from the prior step of planning. The informal meeting the participants accepted when they applied for the project was organized for January 14, 2006 at the ERIC Center in Kaengkrowittaya School, Chaiyaphum Educational

Service Area Office 2, in which the researcher worked as a trainer. On the day of the meeting, the applicants who attended the meeting are shown in Table 23.

Applicants from Phase 4 training		
No.	Names-surnames	Schools
1	Mrs. Napaporn Promdaeng	Kudhooling School
2	Mr.Thawat Somarboot	Saharatnukhro School
3	Mrs.Rattanaporn Wichitsriwara	Muangpayalaewittaya School
4	Ms.Phummarin Tosakul	Ban Chee-longtai School
Applicants from Phase 5 training		
1	Mr.Anirut Moharn	Kaengkrowittaya School
2	Mrs.Nittaya Thorat	Kaengkrowittaya School
3	Ms.Naiyanet Naen-udorn	Kaengkrowittaya School
4	Mrs.Nipaporn Promchai	Kaengkrowittaya School
Applicants from Phase 5 training		
5	Mr.Chalom Tosri	Chumchonbanhuayyang School
6	Ms.Chadaporn Chamnarnmont	Khonsarnwittayakom School
7	Mr.Sriwan Tooyta	Banhunwittaya School
8	Ms.Phatareeya Promhiang	Ban Nongpai School
Conclusion		
**	Percentage of applicants = 13.33% of overall from Phase 4 and 5 trainees	
<i>Sex</i>	<i>Male, 4 = 33.33%</i>	<i>Female, 9 = 66.67%</i>

Table 23: Names and workplaces of the actual participants

Table 23 indicated that 4 applicants from Phase 4 and 8 applicants from Phase 5 training took part in the meeting. The participants intended to conduct their classroom research according to the researcher's project objectives. The informal meeting was organized and it discussed following points: 1) the objectives of the on going meeting; 2) which skills the participants found to be the most difficult to conduct the classroom research; 3) which research topics or titles the participants were interested to undertake; 4) which methods the participants aimed to use in their classroom research designs, and 5) how the participants collected and analyzed the data of the classroom research.

During the meeting, the participants were encouraged to present the research outlines they chose to conduct. After that the researcher assisted them to correct any inappropriate points in their research outlines until an agreement was reached by the participant and researcher that it was an acceptable standard. Ten of the participants satisfactorily agreed with their outlines proposed. However, two of them did not accept to continue the research because of their urgent phone calls, so they left the meeting and cancelled their objectives. Lastly, the meeting was ended and could be concluded the meeting results on the participants' research titles in Table 24:

Volunteer participants' classroom research titles		
No.	Volunteer researchers	CR Titles
1	Mr.Thawat Somarboot	Solving the problems on English reading aloud of Prathom 5 students
2	Ms.Phummarin Tosakul	The study of vocabulary learning by the one-minute activities of Prathom 6 students
3	Mr.Anirut Mooharn	Improving grammatical knowledge for Mattayomsuksa 6 students
4	Mrs.Nittaya Thorat	Creating an English grammar learning package from the movie "Harry Potter and the Sorcerer's Stone" for students in the secondary level
5	Ms. Naiyanet Naen-udorn	Improving English vocabulary learning of Mattayomsuksa 1 students
6	Mrs. Nipaporn Promchai	Using picture clues to improve listening skill learning of Mattayomsuksa 3 students
7	Mr.Chalom Tosri	The teaching effects of error correction on English writing skill development in sentence level of Prathom 5 students
8	Ms. Chadaporn Chamnarnmont	Improving speaking skill through role-play activities for Mattayomsuksa 3 students
9	Mr. Sriwan Tooyta	A study of English learning achievement through the cooperative learning method for Mattayomsuksa 5 students
10	Ms. Phattareeya Phromhiang	Improving listening skill through English songs of Prathom 6 students

Table 24: Volunteer participants' classroom research titles

Table 24 implied that the research participants could determine which English language skill to create the CR titles concluded as: 1) 2 titles of listening skill equaled 20%, 2) 1 title of reading skill equaled 10%, 3) 3 titles of writing skill equaled 30%, 4) 2 titles of integrated skill equaled 20% and 5) 2 titles of vocabulary skill equaled 20%.

From the above discussion, the researcher had the participants report on the problems they encountered in this step. The participants reported respectively from the total participants of each point; 1) selecting the research topics equaled 70%, 2) carrying out the next methods equaled 60%, 3) constructing the CR instruments equaled 60%, and 4) writing the CR reports equaled 30%.

Except for the problems of the procedures of carrying out the classroom research discussed, the participants additionally suggested that the researcher assist in supervising them in terms of; 1) writing the CR proposals, 2) creating the lesson plans, 3) constructing the research instruments, 4) collecting the data, 5) analyzing the data compiled and analyzed by the computerized software, and 6) writing of the reports. Also, the researcher should provide more time for workshop meetings and the CR samples for them to simply follow the CR procedures. Finally, the procedure of this step was accepted to continually conduct within two weeks on creating the CR proposals and instruments for the next step.

After 2 week time period, the researcher followed-up the participants' progress of two points to their classroom research. They are, 1) creating the real CR proposal to further practices, and 2) creating the CR instruments comprised the lesson plans, the questionnaire and the tests for collecting data. The procedure of this task includes:

a) Overall participants finished their assigned tasks to support the next step. The researcher suggested that they to get their instruments approved by the specialists including the experienced teachers in teaching English in the schools close to the participants' workplaces. The researcher had to seek other ELT specialists for the participants to work as their advisers.

b) After they had the specialists approve their CR instruments, the researcher suggested they continue their tasks of collecting the CR data in their classrooms. The researcher made an appointment with the participants to observe them collecting data process.

4.7.3 Observing – observe the effects of action in the context

This step aims to present the process of observing the effects of participants' research conduct after the prior step of acting to support the plan in step 1. The observed process referred to; 1) observing the process of creating the CR instruments and 2) observing the process of their collecting data in the participants' workplaces. The procedure and results could be described as the subsequent aspects:

4.7.3.1) The results of the creating instrument process

This part discusses the results from the observation process during creating instruments. The researcher attempted to elicit that the participants learn by themselves what they use as research instruments and data collecting methods from their CR proposals. During creation of the instruments, the researcher followed up and advised by phoning and visiting them. The results of the observation are as the description below:

1) Three (30%) of the participants could finish their instruments in

two-week time as per their appointments. They were ready for collecting data in the next step.

2) Seven (70%) of the participants could finish some of the instruments they intended to complete but not all. The researcher and the assistant researchers helped them to find out more documents regarding what they needed, such as samples of the research reports, samples of the language lesson plans, and samples of the pre- and post-tests. After a further one-week period, overall the participants could finish their instruments and had them approved by the specialists.

3) After the specialists' checks, the participants corrected some of incomplete parts of the instruments. The researcher asked about the problems occurred and encourage them to correct and determine how suitable the instruments were before using them for collecting data.

From the procedure above, it can be summarized that the participants could create their CR instruments; however, they still needed some encouragements from the researcher to guide them as to what they should have done, selected, and determined about how the instruments were effectively created and used for the classroom data.

4.7.3.2) The results of collecting classroom data

The process of observation in this part mainly presents the on going situations in the participants' actual classrooms. The researcher and the assistant researchers informally visited their work places and observed their classrooms. The observed results can be described as follows:

1) The participants submitted the lesson plans of teaching and learning

processes and tests, and questionnaires intended to collect the data to the researcher for the observational session.

2) The researcher compiled up the observational plans, and had the assistant researchers help observe the participants' classrooms. The observation schedule is presented in Table 25 as follows:

Schedule of observing participants' classrooms				
No.	Volunteer researchers	Obs. dates	Observers (Teachers)	
1	Mr.Thawat Somarboot	23, 30 Jan, 06	Mr.Prayoon	Mr.Wiwat
2	Ms.Phummarin Tosakul	23, 30 Jan, 06	Mr. Kamool	Ms.Pattama
3	Mr.Anirut Mooharn	24, 31 Jan., 06	Mr.Prayoon	Mr.Wiwat
4	Mrs.Nittaya Thorat	24, 31 Jan, 06	Mr.Prayoon	Ms.Saowaluk
5	Ms. Naiyanet Naen-udorn	25 Jan, 1 Feb., 06	Mr.Prayoon	Mr.Wiwat
6	Mrs. Nipaporn Promchai	25, Jan,1 Feb., 06	Mr.Prayoon	Mr.Wiwat
7	Mr.Chalom Tosri	26 Jan, 2 Feb, 06	Mr.Prayoon	Mr.Wiboonsak
8	Ms. Chadaporn Chamnarnmont	26 Jan, 2 Feb, 06	Mr.Prayoon	Mr.Wiboonsak
9	Mr. Sriwan Tooyta	27 Jan, 3 Feb, 06	Mr.Prayoon	Mr.Wiwat
10	Ms. Phattareeya Phromhiang	30 Jan, 6 Feb, 06	Mr.Prayoon	Mr.Wiboonsak

Table 25: The schedule of observing the participants' classroom teaching

From the schedule, the results after the two observation sessions of each participant could be concluded as the below descriptions:

1) The participants' lesson plans for classrooms were proved "appropriate" for teaching and learning process relevant to the objectives of the classroom research titles and proposals.

2) The school principals permitted the observers to observe in the teachers' classrooms. The teachers as amateur researchers were quite nervous but confident to teach in their classrooms. The students seemed active and willingly paid attention in their classrooms. The students in classes were interested in doing class activities and the teachers looked satisfied with the on going classes and happy with their classes for the CR research.

3) During the teaching period for collecting the CR data, the participants

(as teachers) could appropriately teach and follow the guidelines in terms of teaching and evaluative processes in the lesson plans.

4) In the case of observing the conduct of CR process, the participants asked some questions about what and how to continue their CR process and the observers as the supervisors advised them what they needed to know and do.

From the observation sessions, the data collected by the observers could be concluded that; 1) the participants were able to follow their CR process, 2) they could collect appropriate data, and they wanted to know more exact procedures to complete their classroom research.

4.7.4 Reflecting – reflect on these effects

This step presents to reflect the procedure of the participants' CR conduct of finalizing the ELCR model based on the grounded Reflective Model as in Wallace (1991). The procedure of this final step included the participants' and the researcher team's reflections on the process of doing the classroom research according to the research objective in the development of the ELCR model. The discussion comprises; 1) the participants' reflection and 2) the researcher team's reflections in terms of the effects and problems of doing the classroom research process as the following points:

4.7.4.1) The participants' reflections

The researcher had the participants reflect the effects of conducting classroom research as per the earlier discussions. The overall reflections can be concluded as follows:

1) The effects of the classroom research conduct

During the classroom research conducted at the participants' workplaces, the effects from this final step implied that:

a) 4 participants (40%) reported that they understood the process of the exact process and they could finally complete their classroom research.

b) 6 participants (60%) reported that they somewhat understood the classroom research process. However, they felt that after supervising or coaching during the actual practice, they could identify what and how to conduct the classroom research.

c) Finally, the participants reflected that they could complete their classroom research reports although they had encountered some issues whilst collecting data and analyzing the data through the statistical computer program. They also expressed their opinions on conducting the classroom research that the CR process could be helpful for them to decrease some issues that occurred in classrooms. To this point, it can be said that 100% of the participants could achieve their goals in this project and that they were impressed with the supervisory teamwork and could self-study and conduct their further classroom research for the higher teaching positions.

2) The participants' problems of the classroom research conduct

The participants reflected conducting classroom research in this project especially on the problems they faced. The problems here include as follows:

a) They frequently had time limits at their workplaces to join the project that could enhance their professional work. They were responsible for additional school tasks other than the usual tasks of teaching.

b) They had difficulty selecting or creating the classroom titles as there seemed to be lots of issues in language classrooms especially in the more remote

schools. They also had problems with the correct English language use in their lesson plans and test writing.

c) They then reflected that one of the most difficult tasks in conducting the classroom research was creating the instruments including the lesson plans and the pre- and post-tests for collecting data. However, some of them had simple tips for creating the mentioned instruments that was they had used those instruments before; therefore, for the CR; teachers only needed to adapt and improve those instruments so they could be used repeatedly.

d) 5 of the participants (50%) had problems with collecting data in their classrooms, so they called the researcher for assistance. After, they reported they could complete and follow the lesson plans. 6 of them had further problems in guided analyzing the data as they had forgot what they had been taught, so the researcher re-them on how to analyze and helped analyze.

e) The final problem in this step became the report writing of the classroom research. Seven participants (70%) reported issues in this area, so the researcher provided some samples of the classroom research report for them to imitate for writing their reports. Eventually, they could finish their reports although it took some time to complete the write ups.

4.7.4.2) The researcher team's reflections

This sub-part aimed to discuss the researcher and his team's reflections on the CR project for the participants. The reflective data discussed was derived from observing the participants' CR procedure and the self-report both in the open-ended written reports and oral reports. Additionally, the researcher and the staff

evaluated the participants' CR reports. The reflections are discussed as the subsequent aspects:

1) The reflection on observing the participants' procedures

During observing the participants' CR procedures, more observed data can be implied as the following points:

a) The participants' seemed to work dependently especially on the whole methods of the CR. The researcher and his staff had to work quite hard for their CR conduct. Because of their inexperienced tasks, they needed continual help from the experienced supervisors both the researchers and his staff and the experienced teachers close to their workplaces.

b) Though the CR tasks were quite complicated for them, the participants struggled to finish their CR reports. They reported that these tasks on the CR were quite new and difficult for them in terms of actual language classroom research. However, these tasks seemed to be newly traceable for their professional development of the English language teachers.

c) The participants also reported that the CR procedure seemed to be a continual process and they had to focus continually and more responsibly for these tasks. However, after completing the CR tasks, they felt very proud of their achievements and felt more confident towards conducting further classroom research.

2) The reflection on evaluating the participants' CR reports

This sub-part indicates the evaluative results of the researcher and his team. Evaluating 10 participants' classroom research reports adapted from Nunan's (1992' 201) evaluated by 3 of the researcher team; the results could be summarized in Table 26 below:

No	Evaluative issues	% of teachers' reports		% of evaluators' views		Results
		Appropriate	Improved	Appropriate	Improved	
1	CR titles	100	0.00	100	0.00	Appropriate
2	CR purposes	80.00	20.00	100	0.00	Appropriate
3	CR background	60.00	40.00	66.67	33.33	Moderate
4	Sample or subjects	100	0.00	100	0.00	Appropriate
5	Principles of procedure	70.00	30.00	66.67	33.33	Moderate
6	Techniques and instruments	70.00	30.00	66.67	33.33	Moderate
7	Data analysis	100	0.00	100	0.00	Appropriate
8	Time frame and budgets	100	0.00	100	0.00	Appropriate
9	Reporting	80.00	20.00	66.67	33.33	Appropriate

Table 26: The results from evaluating the participants' CR reports

The table above shows the results from the evaluator team comprising the researcher and his staff. The results in column 3 and 4, each shows the percentage (%) of all participants' reports and column 5 and 6, each shows the percentage (%) of all evaluators. The levels used in evaluating were "appropriate" and should be

"improved". The results concluded from the participants' reports and the evaluators' views from each issue were proved between the moderate and appropriate levels.

This can be said that the participants could achieve their goals in joining the project of the classroom research conduct aimed to finalize the development of the English language classroom research model. However, the reflections, from both the project participants and the research team could lead to revising and implementing the prior steps of planning, acting, observing and reflecting the classroom research process; therefore, the current classroom research process could be traceable for planning the next classroom research project.

Finally, the presentation of Phase 7 could be summarized, that finalizing the English language classroom research model obtained from the teacher training

organized in Phase 4 and Phase 5 of the current research. This focused on the action research method included; 1) planning the participants' classroom research conduct, 2) acting to implement the plan – organizing the network meeting for actual practices, 3) observing the participants' CR procedures and techniques of instruments and collecting data, 4) reflecting the effects of all previous procedures made up by the participants and the researcher team about the project achievement.

4.8 Discussions

As the results earlier presented, this section intends to discuss the current research results. The discussions are based on the research questions presented in Chapter 1 comprised;

4.8.1) The Discussions on Research Question 1: *How could a practically and theoretically sound model of the English language classroom research for in-service English teachers be developed?* This part discusses the results from the research methods of Phase 1 - Conducting needs analysis based on the research titled “*A Needs analysis on a teacher training course for in-service secondary school English teachers in Chaiyaphum Province*” and Phase 2 – Identifying the participants' competencies base on the research titled “*A study of perceived knowledge – understanding and needs on a training course of English language classroom research for in-service secondary school English teachers*”.

4.8.2) The Discussions on Research Question 2: *How effective was the developed model of the English language classroom research for in-service English teachers?* This part discusses the results focused on the research methods in Phase 3 – Developing the English language classroom research model, Phase 4 – Assessing

the efficiency of the English language classroom research model, and Phase 5 – Conducting the trial run of the English language classroom research model.

4.8.3) The Discussions on Research Question 3: *What were in-service English teachers' perceptions and reactions to the new model of language classroom research?* Lastly, this part discusses the results based on the research methods in Phase 6: Evaluating the language classroom research, and Phase 7: Finalizing the English language classroom research model.

According to the research questions earlier stated, overall results from every phase are respectively discussed as the subsequent points:

4.8.1 The Discussions on Research Question 1: How could a practically and theoretically sound model of the English language classroom research for in-service English teachers be developed?

This part discusses the results from the research methods of Phase 1 - Conducting needs analysis based on the research titled “A Needs analysis on a teacher training course for in-service secondary school English teachers in Chaiyaphum Province”, and Phase 2 – Identifying the participants’ competencies base on the research titled “A study of perceived knowledge – understanding and needs on a training course of English language classroom research for in-service secondary school English teachers”.

In response to the research question1, called “*the pre-development of the English language classroom research model*”, the conclusive discussions of those phases are presented respectively as the following;

1) The needs analysis outcomes revealed that English teachers’ needs on a training course in overall domains were in the ‘much’ level. The highest frequency of

needs found were in the domain of research development in the aspect of doing a classroom research for language learning and teaching. Overall aspects in each domain of needs on a teacher-training course were found *indifferent*. English teachers also suggested that teacher training was interesting and necessary for improving English learning achievement. The mentioned findings were relevant to those of Promsiri, Prapphal, and Vijchulata's (1996) and Manusilp's (1992). The investigations were on English teaching problems and needs in teacher training of upper-secondary English teachers in the government secondary schools in the Educational Region 12 and in the Educational Region 9 specifying in Khon Kaen Province. English teachers had a great desire for teacher-training programs concerning curriculum objectives, teaching methodology, measurement and evaluation, and knowledge and skills in teaching English. Besides, Woodward's (1991; 4), Brahmakasikara's (1996), Goldfus' and (1996) Nunan's (1988) investigations also pointed that needs analysis for in-service teacher training was essential because there were many different processes available, but very few teachers, trainers or lecturers had themselves been trained in using a variety of options or, in fact even one to its fullest potentials. Additionally, the current research findings were relevant to that of Russell (1993) investigated on the teacher training, teacher education and professionalism in teaching EFL. It implied that that the training, education and certification of practitioners were reliable indicators of theoretical competence and practical skills.

In terms of the differences of needs on training skills among the perception of English teachers, Richards (1984; 4) stated that a means of needs varies wider input into the content, design and implementation of learners' language programs. Also, needs varies to develop learners' different goals, objectives and content of a course.

Practically, secondary school administrators viewed that teacher training was inevitably essential for improving English language teaching and learning. The most necessary for improving language learning achievement was conducting a classroom research, for language learning and teaching and teachers' teaching skills. Moreover, they viewed that current English language courses appeared to be more important owing to the newly reformed curriculum; therefore, the classroom research needed to be conducted together with language learning development. For changes in the world's communication, real learning situations were still unchanged as the real world had. The problems of teaching and learning were found on teachers, materials, and learners themselves. Most English teachers lacked of suitable teaching skills for different learners' abilities. Those administrators accepted that English teachers should be trained, especially the classroom research practice according to the new trends of teaching English as foreign language. It can be concluded that secondary school administrators strongly agreed with a training course in terms of classroom research conduct for English teachers to improve their teaching as a profession.

2) In identifying the participants' competencies, the perceived knowledge – understanding and needs on a training course of English language classroom research for in-service secondary school English teachers was investigated. The outcomes of the investigation were discussed below:

Overall subjects of EL teachers perceived their knowledge and understandings at the level of the "moderate" level. Among overall aspects of the English language classroom research (ELCR), the differences of their perceptions were not found between male and female, among working duration, and experiences of doing the ELCR. However, the differences were significantly found at the 0.05 level between

two types of school, and experiences of the training course on the language classroom research.

In case of needs on the English language classroom research revealed that the highest frequency of every aspect at the "much" level. The differences of needs were found *indifferently* between male and female, among working duration, between two types of school, and experiences of conducting the language classroom research. Except the differences of needs among experiences of training on the language classroom research, they were significantly different at the 0.05 level.

Moreover, the data from the questionnaire and open-ended sub-part were conclusively presented. That is to say, the model of an anticipated training course should have been a workshop session within 1 - 2 day training in each practical session. For the trainers required in the project, the subjects proposed that the experienced researchers in the field of the ELT should be provided.

Eventually, the respondents viewed that there should have been be a specific curriculum of the ELCR with a certain method, process, and report format to propose the educational authorities. Besides, examples of research reports, and the research consultants should be provided while taking a training course or doing the English language classroom research in a workshop session.

The results gained correlate to those of Honma and Wiltshier (1999: online), Burns (1997), and Brudhiprapa and Trikusol (1995). Then, reported that teachers of English perceived that action research programs for professional development were helpful. They also perceived that training reflected new trends for learning and teaching in classrooms. However, because of their continual professional development, they perceived that the knowledge on classroom practices had still

improved. Based on the outcomes of the respondents' reports, English teachers needed to further study how to teach and experience in teaching improvement throughout their careers as Burns' (1994), Hammon's (1994), and Burton's (1994) investigations on EFL development project. In addition, in local Thai settings as stated in the studies of MeeLuae (1997), Kumpon-gnam (1997), Vihokto (1993), Yingnok (2001), Rawee (2001) Chalrdyam (2001) and Thatthong and Thatthong (2002), they reported that teachers' perceived classroom research as helpful and essential instruments for their teaching professions. They were also aware of their knowledge improvement of classroom research but it was difficult, important and necessary for teaching development, so they should participate and further learn the classroom research in any training workshops. For the differences of perceived knowledge - understandings of the CR, teaching positions, types of school, and experiences on the ELCR, they affected the teachers' knowledge and understandings as stated in those of Chalrdyam (2001) and Thatthong and Thatthong (2002). However, that is to say those English teachers chiefly perceived that the ELCR played an important role on developing classroom learning.

For English teachers' needs and the differences of needs on the ELCR, the results of this investigation were related to those of MeeLuae (1997), Kumpon-gnam (1997), Vihokto (1993), Yingnok (2001), Rawee (2001) Chalrdyam (2001) and Thatthong and Thatthong (2002)--which were in similar settings. In-service teachers both working in primary and secondary section together with English teachers identified that they should have been trained more extensively in classroom research. The reason was that the research tasks have been playing an important role to promote their professional progress. The needs and differences of training courses between

experiences of doing classroom research were found; nevertheless, those teachers' needs on a supplementary training course were in the high level. It can be said that teachers currently need to be trained for their teaching profession, particularly in classroom settings. Noticeably, teachers' perceived knowledge and understandings of the English language classroom research methods were found at the "much" or "moderate" levels, still their needs were found at the "much" level.

Practically, the qualitative study comprising data from group discussion and interviews with educational administrators, and experienced experts in classroom research were implied from the genuine school settings in two major points such as, 1) the problems on classroom research practices mainly covered the research methods and formats, which should have been a specific method, or format correlated so that the educational sectors could be identified for teachers' promotion. 2) different resolutions of the problems proposed that there should have been a proper training course continually consulted by experienced researchers as consultants in any workshop sessions. These responses and opinions were associated with those outcomes of Chalardyam's (2001) and Thatthong and Thatthong's investigation of the needs on the classroom research. Particularly, classroom research on ELT, teachers had major problems on practices of the ELCR methods. Finally, as the prior discussions, possible reasons from teachers' ratings, opinions and interviewees' responses on practices of the English language classroom research could be from their actual experiences and practices in the school settings of the Office of the Basic Education; as a result, the data from the discussed points could have been an important guideline for the curriculum development of the language classroom research.

4.8.2) The Discussions on Research Question 2: How effective was the developed model of the English language classroom research for in-service English teachers?

The discussion in this part focused on the results and processes of the research methods in Phase 3 – Developing the English language classroom research model, Phase 4 – Assessing the efficiency of the English language classroom research model, and Phase 5 – Conducting the trial run of the English language classroom research model. The results are conclusively discussed as the followings:

1) The process of the curriculum development in language teaching involves the innovative language programs in terms of developing, implementing, and evaluating as in Richards' (2001) views. In response to the development of the curriculum, the researcher had the developed innovation proved or evaluated by the specialists specialized, in classroom research and language teaching. For the contents of the curriculum model, the specialists viewed that they were wholly appropriate and acceptable. Besides, the language used in the model sounded quite appropriate and acceptable. However, the researcher had followed the specialists' suggestions to correct or add some points of the classroom research aspects necessary for teachers' real practices. While developing the ELCR curriculum, the developer had encountered different problems in the starting point as;

a) determining the exact model, research components, together with the appropriate language used in the model,

b) deciding and designing the innovative language teaching in case of methods, materials and evaluation,

c) finding appropriate classroom research innovations for implementing and solving problems in the classrooms in the regional area schools.

Generally, the curriculum development in classroom research was mostly found in the general education for different forms of classroom research of subjects. But the classroom research in the field of English language teaching, the exact model was not found. Therefore, developing the model referred to the current research specifically in the innovation of ELT was found to be one of the most burdensome that the developer had struggled to accomplish the sounded model for language teachers.

2) Developing the English language classroom research model in the present investigation included seven different procedures as; 1) needs analysis, 2) identifying the participants' competencies, 3) developing the model, 4) assessing the model efficiency, 5) trailing the model, 6) evaluating the model, and 7) finalizing the model. Those procedures were similar to those of Maneekosol (1996) – the development of action research curriculum for the primary teachers, Phengsawat (2001) – a construction of self-development package of classroom research, and Warnset (2002) – a curriculum development in rehabilitation for parents of the preschool children with intellectual disabilities. The procedures adopted summarily consisted of: 1) the context analysis, 2) the curriculum draft development, 3) the evaluation of curriculum draft, 4) the implementation, and 5) the evaluation. In each procedure, the efficiency of developed curriculum was proved effective based on both the specialists' checks and the efficiency proved by the statistical techniques. However, in some inappropriate parts of the curriculum, the researcher had to revise and improve those to be more appropriate according to the specialists' suggestions. Therefore, those

curriculum designed could be implemented and adapted for real practices in the on going situations.

The mentioned procedures could be summarized as; 1) the pre-development of the curriculum (as the present study in Phase 1 and 2), 2) the ongoing-development of the curriculum (Phase 3, 4, and 5), and 3) the post- development of the curriculum (Phase 6 and 7). However, in the present study, the researcher had additionally conducted Phase 7 - finalizing the developed model. The final phase led the participants to the action of real practices of the English language classroom research so they could complete their ELCR tasks. In real practices, it took a long time and was the most burdensome to complete. However, the participants and the researcher team cooperated in conducting their research tasks until the reported could be completed.

4.8.3) The Discussions on Research Question 3: What were in-service English teachers' perceptions and reactions to the new model of language classroom research?

The discussions on the English language classroom research model developed in Phase 3, the efficiency assessed in Phase 4, and experimented in Phase 5 were earlier presented. Finally, this point mainly discusses the participants' perceptions and reactions to the English language classroom research model. As a result, the results from the procedures in Phase 6 – Evaluating the ELCR model, and Phase 7 – Finalizing the ELCR model are conclusively discussed and presented as the followings:

1) The evaluation of the training projects conducted to assess the LCR efficiency in Phase 4 and experiment the use of the ELCR model in Phase 5 as stated in the investigatory methodology revealed that: the perceptions in terms of the

participants' 1) reactions, 2) learning outcomes, 3) behaviors, 4) project results, and 5) language proficiency improvement were between the 'moderate' and 'much' levels. The participants perceived that the training projects on the use of the ELCR model was quite complicate for them, but they commented that the model was worthy and helpful for the classroom implementations. Additionally, they noted that to the training model should have been the project coaching in real research practices. Finally, some of the participants taking part in the project further learnt and reacted to the training model by joining the real research practices as demonstrated in Phase 7.

As earlier discussion, the results of the present investigation were associated with Nunan's (2001:202), Yingnok's (2001), Chalardyam's, and Thatthong and Thatthong's suggestions, the principal problems identified by the teachers wit whom the author had worked in a number of various contexts included: 1) lack of time, 2) lack of expertise; 3) lack of ongoing supports, 4) fear of being revealed as an incompetent teacher, and 5) fear of producing a public account of their research for a wider (unknown) audience. Moreover, the problems on conducting research based on teachers' self-confidence in research knowledge and understanding. Most in-service teachers perceived that conducting the classroom research was difficult, important, necessary, and helpful for the teachers working in the primary and secondary school levels.

To solve those problems as per the linguist's recommendations; therefore, in the present research the researcher supported the practical project for participants' real research conducts and practices in their classroom contexts. The training projects mentioned had provided: 1) someone with the research expertise, 2) researcher team, 3) the training project supplementing the research methods, 4) available time, and 5)

collaborative practitioners. These components provided could support the classroom research participants in accomplishing their objectives of the classroom research practices. This can be directly stated that the present study was relevant to Sitthisomboon's (2002) investigation. Its results implied that training classroom research should be focused and presented on the practical model more than the theoretical model. Besides, additional recommendations on specific learning strand such as, mathematics, science, or Thai subjects should have been constructed for the teachers occupied for those subjects.

2) As the procedures stated in conducting Phase 7, the discussions can be summarized that finalizing the English language classroom research model was obtained from the teacher training organized in Phase 4 and Phase 5 of the current research. This focused on the action research method included; 1) planning the participants' classroom research conduct, 2) acting to implement the plan – organizing the network meeting for actual practices, 3) observing the participants' CR procedures and techniques of instruments and collecting data, 4) reflecting the effects of all previous procedures made up by the participants and the researcher team about the project achievement. The action research process in Phase 7 used could imply similarly to Maneekosol's (1996), and Phengsawat's (2003) development of action research curriculum and the package on classroom research for the primary teachers that in every stage of experimenting the curriculum implementation, the subjects had the same opinions on the learning objectives in training, the model contents, and training activities that these were acceptably appropriate for the further implementation in teacher development.

In Thai educational settings, different sector of educational promotion had attempted to develop the teachers' professional concerns and spread the self-training packages titled, 'The Classroom Research' for teachers in order to improve their careers. Those exemplarily included; 1) the self-training package constructed by the Supervisory Unit, the Department of General Education (1992-1997), 2) A training package "Self-learning doing research (Institute of research and development, Sukhothaithammathirat; 2000), 3) the Research for Learning Improvement due to the Basic Education Curriculum, and 4) different research publishing of the private sectors. These mentioned classroom research copies were based on general education, but the specific model for the English language teaching was not found in the Thai educational settings. They were only found via linguists' copies from overseas.

Hence, it could be implied that the current investigation of developing the English language classroom research model could implement the English language teachers' professional development as stated in the newly current trend of the Office of the Basic Education (2002) in terms of promoting teachers' positions (Teacher Ranking 3). The guideline regulation was indicated in the Institute of Teacher and Educational Personnel Development (2002) that the evaluation criterion includes an academic document based on the classroom research which aimed to improve the students' learning capacities.

4.9 Summary

This chapter presented and discussed the results of this study which was allied to with the stated research questions. The results of the present investigation contained 7 phases summarily presented as the followings: 1) Phase 1 – conducting needs

analysis implied the participants needs of English language classroom research at the ‘most’ level, 2) Phase 2 – identifying the participants indicated the knowledge and understanding on the classroom research at the ‘moderate’ level, as well as the needs on the training course at the ‘much’ level within 1 – 2 days trained by the ELT research experts, 3) Phase 3 – developing the ELCR model constructed 8 modules based on the related documents with the reflective training model and sounded appropriateness of the specialists’ checks, 4) Phase 4 – assessing the ELCR efficiency resulted the appropriate IOC validity and the appropriate efficiency check of the E1/E2 process, 5) Phase 5 – Conducting the trial run of the ELCR model revealed the efficiency of the participants’ progress in training and positive perspectives, 6) Phase 6 – evaluating the ELCR model resulted the appropriate and worthy training model, and the participants’ positive views, and 7) Phase 7 – finalizing the ELCR model conducted by the action research cycle, revealed the sounded process of the research practices and 10 classroom research reports.

The two final chapters of this investigation include Chapter 5 and 6. Chapter 5 will present the results on the development of the English language classroom research model, the precise process of the development. Finally, Chapter 6 will present the summary of the overall research findings, implications, and suggestions for further investigation.

CHAPTER 5

ENGLISH LANGUAGE CLASSROOM RESEARCH

MODEL – PRAYOON’S MODEL (PELCRe)

In response to the objectives of this investigation, this chapter mainly presents the English language classroom research (ELCR) model – PELCRe model. The presentation includes: 1) the model for instructional design, 2) PELCRe model, and the outcomes of the model implementation. The details are presented as follows:

5.1 The Model for Instructional Design

5.1.1 Definitions

1) What is a model? A model Charbonneau’s (2005) defines that it is a theoretical construct used as thinking aid in the study of some physical system too complex to be understood by direct inferences from observed data. It is important to emphasize that a model is not a real world but merely a human construct to help us better understand real world systems. In general all models have an information input, an information processor, and an output of expected outcomes.

2) Instructional design model as Edu Tech Wiki and Branch (2006) define that an instructional design model is a guideline or set of strategies on which the approaches to teaching by instructors are based. Effective instructional models are based on learning theories. Models help us to visualize the problem, to break it down into discrete, manageable units and provide procedural frameworks for the systematic

production of instruction. One model can be used for an entire course of instruction or elements from multiple models can be combined.

5.1.2 General instructional design phases

Many models exist for use by different levels of instructional designers and for different instructional purposes; however, the process can be summarized into five general phases as in Branch's procedure (2005) as follows.

1) Analyze phase

The analyze phase may include specific research techniques such as needs analysis, job analysis and task analysis. The outputs of this phase often include the instructional goals, and a list of tasks to be instructed. These outputs will be the inputs for the design phase.

2) Design phase

The design phase involves using the outputs from the analyze phase to plan a strategy for developing the instruction. During this phase, the designer must outline how to reach the instructional goals determined during the **Analyze** phase and expand the instructional goal.

3) Develop phase

The develop phase builds on both the **Analyze** and **Design** phases. The purpose of this phase is to generate the lesson plans and lesson materials. During this phase the designer will develop the instruction, all media that will be used in the instruction, and any supporting documentation. This may include hardware (e.g., simulation equipment) and software (e.g., computer based instruction).

4) Implement phase

The implement phase refers to the actual delivery of the instruction,

whether it's classroom-based, lab-based, or computer-based. The purpose of this phase is the effective and efficient delivery of instruction. This phase must promote the students' understanding of material, support the students' mastery of objectives, and ensure the students' transfer of knowledge from the instructional setting to the job.

5) Evaluate phase

This phase measures the effectiveness and efficiency of the instruction.

Evaluations should actually occur throughout the entire instructional design process – within phases, between phases, and after implementation. Evaluation may be formative or summative.

Formative evaluation is ongoing during and between phases. The purpose of this type of evaluation is to improve the instruction before the final version is implemented.

Summative evaluation usually occurs after the final version of instruction is implemented. This type of evaluation assesses the overall effectiveness of the instruction. Data from the summative evaluation is often used to make a decision about the instruction (such as whether to purchase an instructional package or continue/discontinue instruction).

The process of instructional design can be summarized into five phases shown in Figure 13.

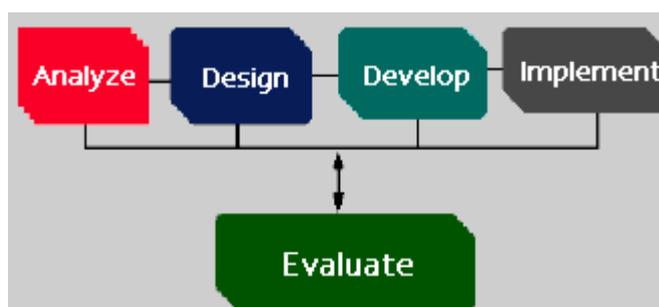


Figure 13: General instructional design phases

These phases sometimes overlap and can be interrelated; however, they provide a dynamic, flexible guideline for developing effective and efficient instruction.

According to the instructional design model earlier stated, every phase can be the guideline for the model formation intended to illustrate in this investigation called Prayoon's English language classroom research model –PELCRe model in the subsequent presentation.

5.2 English Language Classroom Research Model – Prayoon's Model (PELCRe)

This section contains the formation of Prayoon's English language classroom research model – Prayoon's model (PELCRe). The components of the PELCRe model include the following aspects:

5.2.1 Rationale

Central to English language teachers' professional concerns knows what happens in the classroom and how that knowledge can feed back into teaching and maximize language learning. Professional in-service programs for English language teachers have in recent years drawn on educational research processes which focus teachers' attention on their own teaching and learners' performance. English language teachers are increasingly becoming experienced in research processes and many are active roles in designing, implementing, and evaluating English language curriculum and learning processes. They are frequently supported in this by their own school or

educational unit, since institutions, rather than systems, are now encouraged to manage local teaching-support needs (Burton' 1994: II).

Second or (foreign) language classroom research is research that is carried out in the English language classroom for the purpose of answering important questions about the learning and teaching of foreign languages. This kind of research derives its data from either genuine foreign language classrooms (classroom specifically constituted for the purposes of foreign language learning and teaching) or in experimental laboratory settings that are set up for the purposes of research. These experimental settings are sometimes established to replicate or recreate what happens in English language classrooms, although more often than not laboratory settings make no pretense at such replication. (Nunan, 1990: online)

Practically, the major guideline of the 2001 Basic Education Curriculum identifies that research is an instrument that supports the education reform to be efficient and effective, so research process employed together with learning processes can be achieved (Academic Department, Ministry of Education, 2002:10). The stated guideline indicates that research for learning development that guides teachers for improvement of learning itself. The process includes learning problem analysis, planning learning problem solving, data collection, and systematic data analysis. These guide teachers to do research and develop educational innovations traceable for learning quality.

5.2.2 Objectives of the model

- 1) To describe and predict the stages that learners pass through in acquiring English language, and to identify the process through which learners acquire the target language.

2) To identify the pedagogic variables that may facilitate or impede acquisition.

3) To examine, in greater depth than what is done in the core “Research Methods’ course, some of the instruments and methods used in classroom-related data collection: questionnaires, interview schedules, classroom observation schedules, (and ethnographic alternatives), diaries, repertory grids, and stimulated introspection instruments.

4) To gain practical experience in using some of these methods, particularly English classroom observation, to collect, analyze and write up data.

5) To self-develop of teachers as researchers that can facilitate educational institutions.

5.2.3 Elements of the model process

The elements of the model process of the Prayoon’s English language classroom research model (PELCRe) in this study include seven phases. Each phase is presented as follows:

1) Pre-developmental stage

This stage consists of conducting Phase 1: Conducting needs analysis and Phase 2: Identifying the participants’ competencies. The details are as follows:

Phase 1: Conducting needs analysis

This phase implies a form of research investigating needs analysis on training skills for developing an English teacher training course of English teachers under the jurisdiction of the Office of Basic Education. The needs analysis could be obtained from the questionnaire, a semi-structured interview and group discussion of the target group of English teachers.

Phase 2: Identifying the participants' competencies

This phase could be a form of research to investigate the participants' competencies as well as needs on training in the course of English language classroom research. The participants' competencies and needs on training the course of ELCR are obtained from the questionnaire, a semi-structured interview, and a group discussion from the target group of English teachers.

2) Developmental stage

This stage illustrates the processes of Phase 3: Developing the ELCR model, Phase 4: Assessing the efficiency of the ELCR model, and Phase 5: Conducting trial run of the ELCR model. More details are presented as follows:

Phase 3: Developing the ELCR model

This phase includes the development of eight modules for English language classroom research. Each module consists of the following topics:

(1) Module 1: Identifying background knowledge of ELCR

This point comprised definition, research scope, value, characteristics, process, and limitation of the English language classroom research.

(2) Module 2: Basic elements of ELCR

The basic elements covered major issues of learning by instruction, roles and teacher talk, learner behaviors, classroom interactions, and learning strategies, evaluating and developing the problems, valuables and hypotheses of the language classroom research.

(3) Module 3: Review of related literature of ELCR

This topic included definition, characteristics, objectives, importance and selection, writing the report and referencing of the related literature.

(4) Module 4: Developing innovations in ELCR

This module was consisted of definition and characteristics, category, the role and development, and example cases of innovation development in the English language classroom research.

(5) Module 5: Designing an ELCR

This point includes the quantitative research consisted of major components of experimental research, single group designs, and quasi-experiment designs. Moreover, it covers the qualitative research in terms of the necessity and how to conduct the qualitative research.

(6) Module 6: Collecting data through ELCR

This part is composed of determining what constitute data, the process for quantitative research, and the description of the data collection procedures in qualitative and quantitative researches typical use in the second language classroom research. Furthermore, it includes issues and problems and assuring the quality of the data and data collection procedures.

(7) Module 7: Analyzing data through ELCR

This point covers data analysis and the design of the study, analyzing qualitative data, descriptive research, and analyzing experimental research data.

(8) Module 8: Reporting, summarizing, and interpreting the results

This part includes reporting and summarizing of quantitative and qualitative research, interpreting the results, and reporting research.

Except the lessons of each module, additional components of each module contain lists of contents, background concepts, objectives, training activities, and evaluation in the first section. Besides, the final parts after the lessons are

composed of trainee's self-evaluation and self development for remedial training.

Phase 4: Assessing the efficiency of the ELCR model

This phase aims to assess the efficiency of the model including a single experiment, a small-grouped experiment, and a large-group experiment. The outcomes can be derived from the training workshop by using the pre- and post tests, the ELCR model, checklists for opinion assessment, semi-structured interview, observation and efficiency assessment of E1/E2 to assess the model efficiency.

Phase 5: Conducting the trial run of the ELCR model

This point aims to conduct the trial run of the model by organizing the training workshop. The results can be obtained from the training workshop by using pre- and post tests, the ELCR model, checklists for opinion assessment, semi-structured interview, and observation.

3) Post-developmental stage

Post-developmental stage includes the phases after developmental phases of Phase 6: Evaluating the ELCR model, and Phase 7: Finalizing the ELCR model. More details are in the subsequent points:

Phase 6: Evaluating the ELCR model

This phase aims to evaluate the ELCR model by using the evaluative model of Kirkpatrick's including: 1) participants' reactions, 2) participants' learning outcomes, participants' behaviors, 4) project results, and 5) language proficiency improvements. The evaluative instruments include five-rating scaled questionnaire, semi-structured observation and the participants' self-reports.

Phase 7: Finalizing the ELCR model

Finalizing the ELCR model aims to verify the efficiency of the ELCR

model. The framework of this phase covers the action research method including: 1) Planning – developing the plan of the action for participants’ English language classroom research, 2) acting – act to implement the plan by managing the process of participants’ conducting actual practices of classroom research. , 3) Observing – observe the effects of the action in the context of conducting classroom research in the participants’ workplaces, and 4) reflecting – reflect on these effects of participants’ reports of English language classroom research.

Finally, from overall aspects concerning the process of the ELCR model, they can be constructed in the model formation in Figure 14.

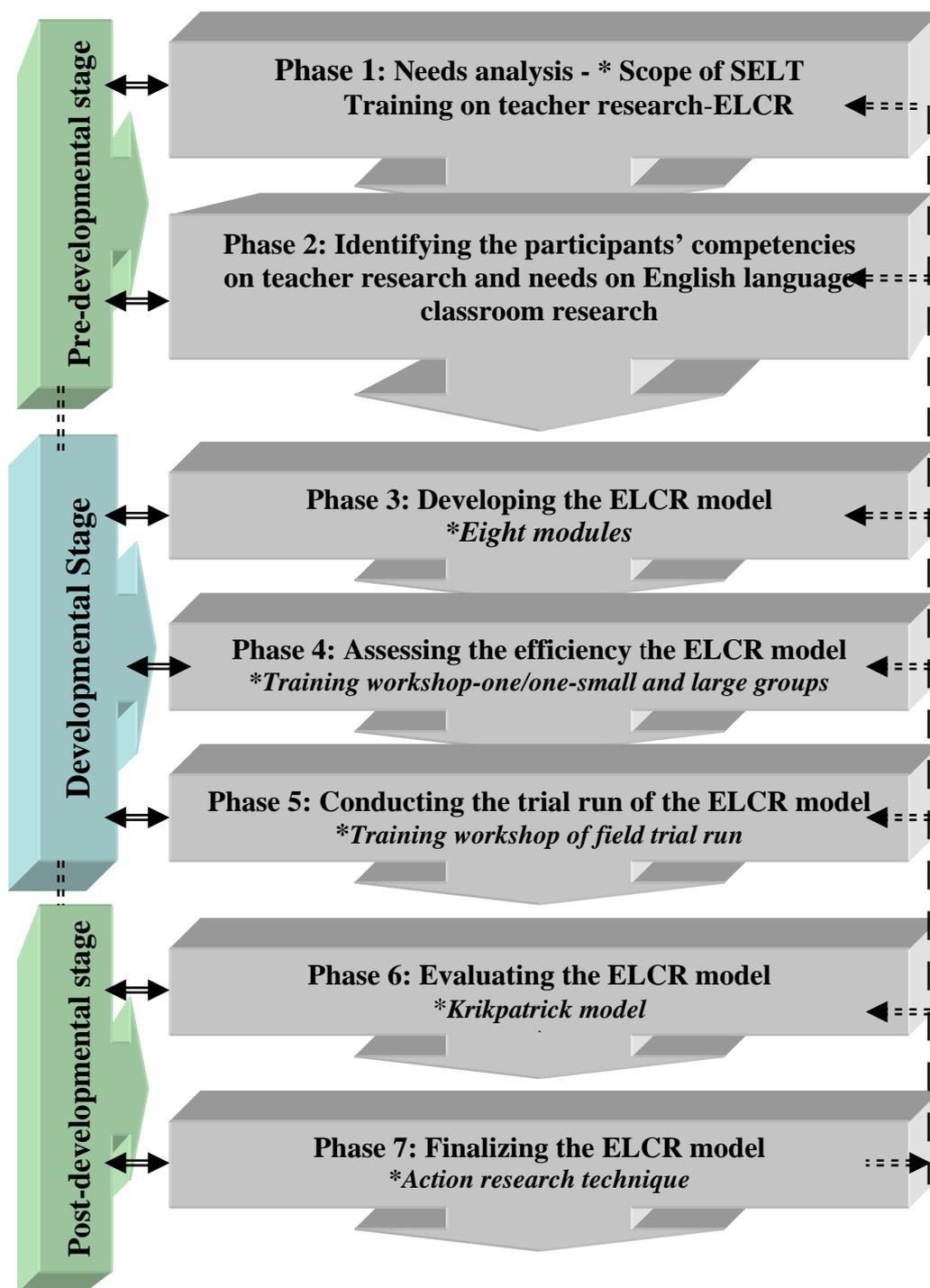


Figure 14: The Process of PELCR Model

The process of the model illustrated in Figure 14 indicates that the procedure in three stages was chronologically conducted from phase to phase. After finalizing the model, the model designer may revise back to earlier phases especially the initial phase to revise the needs analysis of English teachers in terms of more needs on English language classroom research.

5.3 Summary of the Development of the English Language Classroom Research Model

This section aims to present the summary of the developmental processes of the English language classroom research model. The developmental processes were developed based on the research questions stated in Chapter 1. The presentation indicated as the following points:

5.3.1) Pre-developmental stage

This sub-part presents the pre-developmental stages based on Research Question 1, “*How could a practically and theoretically sound model of the English language classroom research for in-service English teachers?*” The pre-developmental stage included: **Phase 1:** Conducting needs analysis, and **Phase 2:** Identifying the participants’ competencies. The outcomes of the two investigatory phases could result a traceable guideline to develop a practically and theoretically sound model of the English language classroom for in-service English teachers in Phase 3. The model comprised the research question, the instruments used and the results of the studies. The model figure was demonstrated as in Figure 15:

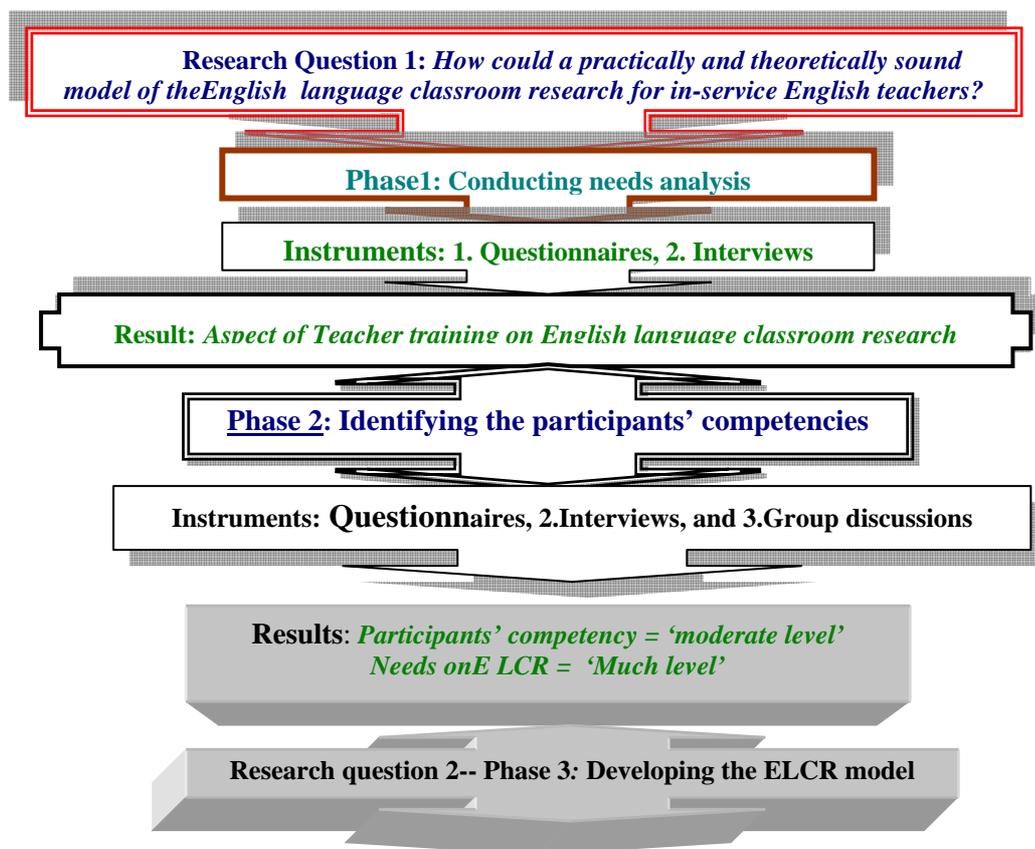


Figure 15: Pre-developmental stage of developing the ELCR model

The figure above demonstrated that the investigations on needs analysis in Phase 1, and the participants' competencies and the needs on the English language classroom research could be the appropriate basement for developing the sounded model of the English language classroom research according to the research purposes of this study.

5.3.2) Developmental stage

This sub-part additionally presents the developmental stages based on research purpose and question 2, "How effective was the developed model of the ELCR research for in-service English teachers?" The developmental stage comprised; **Phase 3: Developing the English language classroom research model**, **Phase 4: Assessing the efficiency of the English language classroom research model**, and **Phase 5: Trialing**

the English language classroom research model. The outcomes indicated the process of the practical development of the sound model stated in the prior stages. The model contained the research question, the instruments used and the outcomes of the studies.

The model figure of these stages could be summarized and shown in Figure 16:

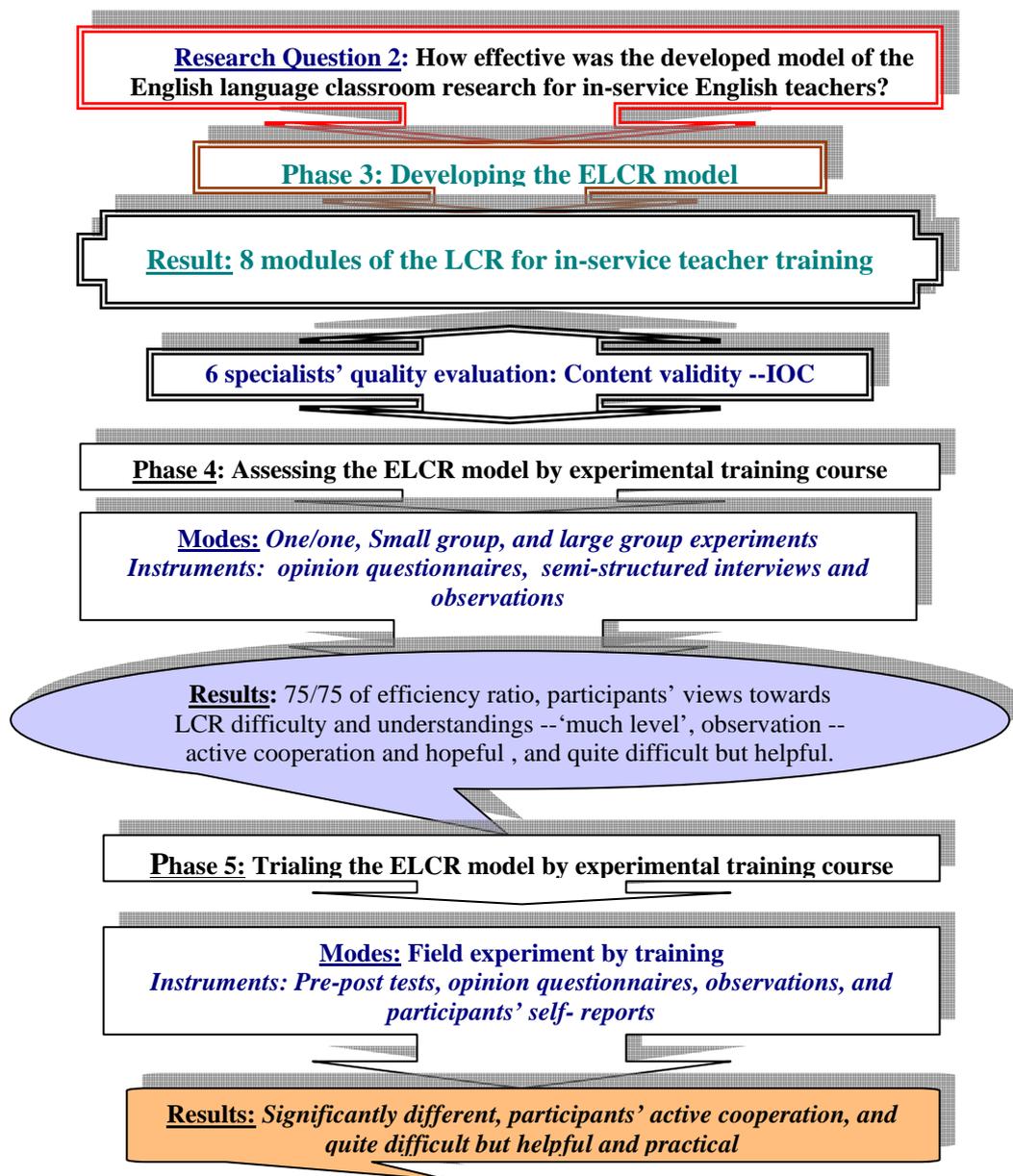


Figure 16: *Developmental stage of developing the ELCR model*

Figure 16 above indicated that the developmental stages were designed based on research question 2. The phase of developing the model was overlapped with the

pre-developmental stages in order that it could base the latter stages of assessing and trialing the model efficiency. The efficiency from Phase 3 revealed that 6 specialists' checks of the Item Objective Congruence (IOC) for the ELCR model were proven 'appropriate' in both classroom research components and language usage.

Then, assessing the ELCR model efficiency in Phase 4 implied that the methods of one to one, small group and large group assessments revealed the 70/70 efficiency ratio. Moreover, most participants' opinion assessments towards the difficulty of the ELCR model and their understandings on the ELCR presentation revealed between the 'moderate' to 'much' levels. The data from the semi-structure interviews implied that the ELCR model was very helpful and practical. The classroom research practices in schools would be completed, if they got further help from the research experts. The results from the semi-structured observations implied that the participants were enthusiastic, hopeful and eager to learn but worried about the research conducts.

Lastly, Phase 5 to assess the ELCR model efficiency in the field experiment revealed that the participants achieved the goals of learning. They viewed that the LCR model was quite difficult and they could understand the ELCR contents at the 'moderate' to 'much' levels. They also performed enthusiastically and hopefully in the training project and reported that the ELCR model was practical and helpful. They could complete the classroom research if they got further help from the research experts.

5.3.3) Post-developmental stage of the ELCR research model

This sub-part intended to conclude the process of the post-developmental stage based on the prior processes of Phase 3, 4, and 5. It included Phase 6: Evaluating the

ELCR model and the training project, and Phase 7: Finalizing the ELCR model aimed to explain the process completion. The final two phases intended to response the research question No. 3. Overall processes were summarized in Figure 17:

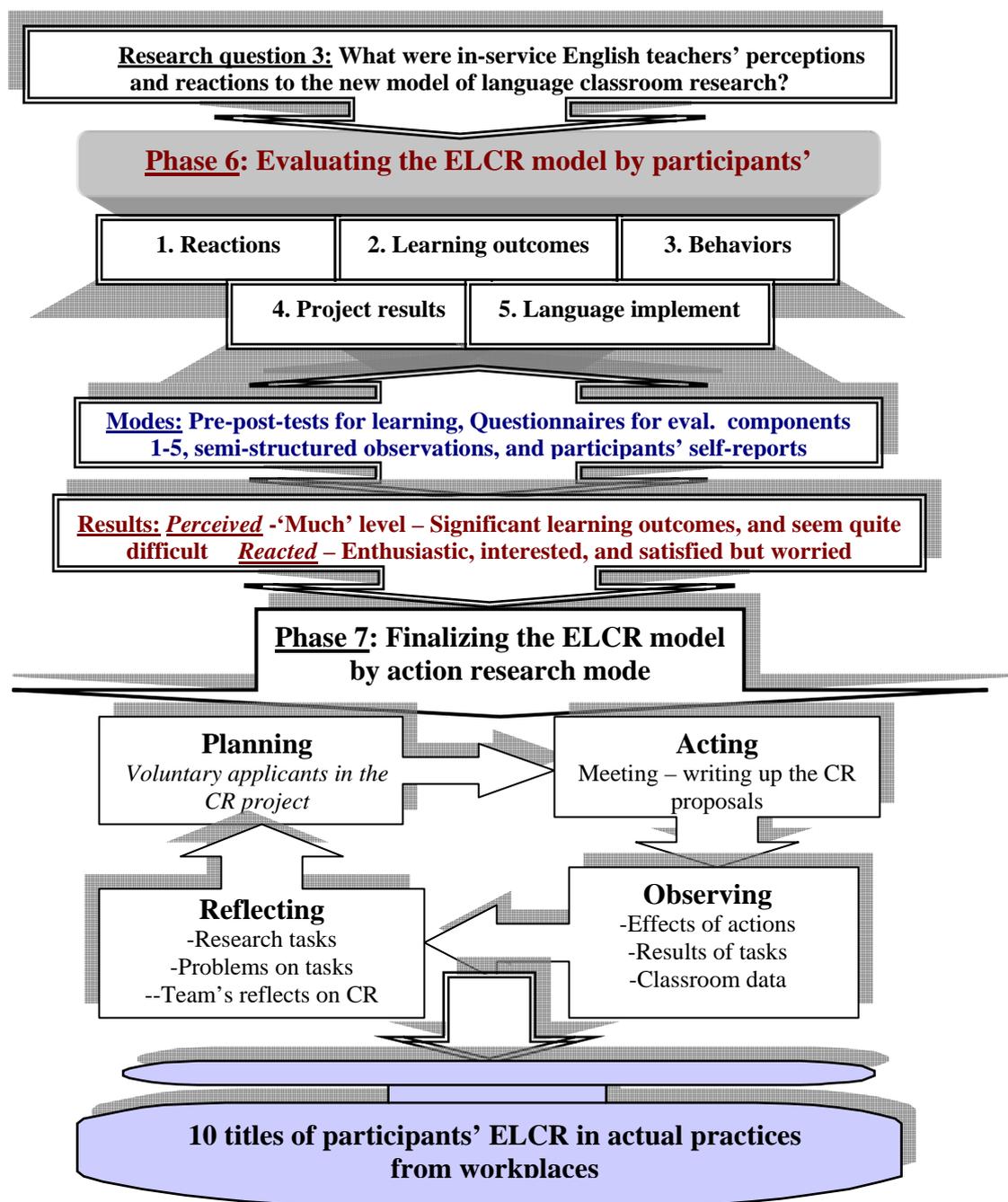


Figure 17: Post-developmental stage of developing ELCR model

The post-developmental stages of developing the ELCR model aimed to response the research question and purpose No.3. The process included Phase 6 -

Evaluating the ELCR model by the participants taking part the training project in Phase 4, and Phase 5. The evaluative components of this phase contained the participants' reactions, learning outcomes, behaviors, the project results and the language implement. The evaluative instruments were the questionnaires, semi-structured observations, and participants' self-reports. Also, the learning outcomes were also evaluated by the pre- and post-test to assess the participants' performance. The results revealed that the participants perceived the newly sound ELCR model at the 'much' level. The participants reacted in the positive reactions; however, they felt worried in doing the classroom research.

Eventually, Phase 7 – Finalizing the new ELCR model included the method of action research technique – planning, acting, reflecting, observing and reflecting on the participants' actual classroom research practices. Initially, planning the project was prepared in the two training sessions in assessing and trialing the model. The volunteer participants took part in the classroom research actual practices. They chose the research titles based on their real classroom problems and conducted those tasks accompanied by the research team's supervisions. Then, the research team observed the data collecting process and offered the participants more comments. Finally, the participants reflected their classroom research tasks, got them improved and wrote up the real reports for the future academic distribution.

The above discussions of this section indicated the process of developing the new ELCR model. The final part covered the developmental outcomes from the processes earlier stated.

5.4 The Outcomes of the Development of the ELCR Model

This part illustrated the outcomes of the participants' classroom research tasks previously mentioned in Phase 7 – Finalizing the ELCR model in the part of Acting contained in Table 24 showed the volunteer participants' classroom research titles. After the cycles of planning, acting, observing, and reflecting in actual practices, wholly 10 participants could complete their classroom research tasks. The subsequent presentations comprised 10 CR abstracts as follows:

(1)
<p>Researcher: Mr. Thawat Somarboot</p> <p>Research Title: Solving the problems on English reading aloud of Prathom 5 students</p> <p>Duration: February – March, 2006.</p> <p>Place: Saharatnukhro School, Khonsawan District, Chaiyaphum Province</p>
Abstract
<p>This classroom research aimed to solve the problems on English reading aloud of Prathom 5 students studying in Semester 2, 2005 in Saharanukhro School, Khonsawan District, Chaiyaphum Province. This target group included selected 15 students who could not read aloud or pronounce the words, phrases and sentences accurately and fluently in the lessons learned. The instruments used to collect the classroom data in this study were: 1) two lesson plans, 2) 5 reading aloud kits, 3) a tape recorder, and a reading cassette, 4) a questionnaire for scoring and 5) a questionnaire for the subjects' opinions towards reading practices. The classroom data gained were analyzed by using the percentage criterion.</p> <p>The study resulted that 10 students (66.67%) could achieve the reading criterion of 80%, but the others could achieve reading criterion lower than the criterion. However, the students reported in the questionnaire that they got more reading practices and were able to read aloud better than ever before.</p>
(2)
<p>Researcher: Ms. Phummarin Tosakul</p> <p>Research Title: The study of vocabulary learning by the one-minute activities of Prathom 6 students</p> <p>Duration: January – March, 2006.</p> <p>Place: Bancheelongtai School, Muang District, Chaiyaphum Province</p>

Abstract

This classroom research aimed to study Prathom 6 students' vocabulary learning using the one-minute activities. The target group of students was 25 Prathom 6 students studying in Semester 2, 2005 in Bancheeelongtai School, Muang District, Chaiyaphum Province. The tools used for classroom data were: 1) 1 a lesson plan, 2) 5 packages of vocabulary practice, 3) post-test after the activities completed, and 4) observation form of activities. The data were analyzed by using the mean, percentage of learning criterion and the description.

The study was found that 12 students (48%) could reach the criterion of 80%, 10 students (40%) could reach 60% of the total scores, and the rests could not pass 60% criterion. The mean score was 68 which was satisfactory. The classroom observations revealed that the students were interested and had fun in the one-minute activities of vocabulary learning.

(3)

Researcher: Mr. Anirut Mooharn

Research Title: Improving grammatical knowledge for Mattayom 6 students

Duration: January – March, 2006.

Place: Kaengkrowittaya School, Kaengkro District , Chaiyaphum Province

Abstract

This study aimed to: 1) improve grammatical knowledge for fundamental English course and 2) study the opinions towards improving grammatical knowledge of M. 6 students in Kaengkrowittaya School. The target samples consisted of 34 students selected from who got lower than 50% criterion score of the formative grammar test from the lessons learned in Room 6/5 studying in Semester 1, 2005. The tools included: 1) a lesson plan, 2) 4 grammar lessons, 3) a grammar achievement test, and 4) an opinion questionnaire towards learning. The data were analyzed by using the mean, standard deviation and the t-test.

The results revealed that: 1) the student group had the significantly higher mean score of the post-test than the pre-test at the 0.05 level, and 2) those students also expressed their satisfactions of learning grammar at the 'much' level. This study implied that the grammar lessons could improve the students' English grammatical knowledge.

(4)

Researcher: Ms. Nittaya Thorat

Research Title: Using an English grammar learning package from the movie "Harry Potter and the Sorcerer's Stones for Mattayomsuksa 3 students.

Duration: January – March, 2006.

Place: Kaengkrowittaya School, Kaengkro District , Chaiyaphum Province

Abstract

This classroom study aimed to 1) use an English grammar learning package from the movie “Harry Potter and the Sorcerer’s Stone” for M.3 students, 2) improve M.3 students’ grammar learning achievement. The sample group included 230 M.3 students, purposively selected from the classrooms the researcher currently taught. The instruments used in this study contained: 1) 28 grammar points in learning packages from 14 scenes of the movie, 2) pre- and post-tests, and 3) the attitude questionnaire. The research data were analyzed by using the percentage, mean, standard deviation, and the t-test.

The results were found that the students’ mean scores of the post-test were significantly higher than of the pre-test at the 0.05 level. The students’ attitude scores from the questionnaire were at the “good” level. They also reported that they liked the learning packages likes these because they were interesting.

(5)

Researcher: Ms. Naiyanet Naen-udorn

Research Title: Improving basic vocabulary learning of Mattayomsuksa 1 students

Duration: January – March, 2006.

Place: Kaengkrowittaya School, Kaengkro District, Chaiyaphum Province

Abstract

This study aimed to: 1) improve basic vocabulary learning, and 2) the opinions towards learning basic vocabulary of Mattayomsuksa 1 students. The target sample group in this study was 20 M.1 students selected from the lowest scored group in classroom 1/4. The instruments used included: 1) a lesson plan of vocabulary learning, 2) 5 packages of basic grammar lessons, 3) the pre-and post achievement test with 50 items, and 4) the self-report through learning packages. The data were analyzed by the mean, standard deviation and the t-test.

The study revealed that: 1) the students got the post-test scores significantly higher than the pre-test scores at the 0.05 level, and 2) the students reported that they had a better chance in learning English and the lessons were good for them to practice basic vocabulary.

(6)

Researcher: Ms. Nipaporn Promchai

Research Title: Using picture clues to improve listening skill of M. 3 students

Duration: January – March, 2006.

Place: Kaengkrowittaya School, Kaengkro District, Chaiyaphum Province

Abstract

This study aimed to use picture clues to improve listening skill of Mattayomsuksa 3 students. The target samples were 92 M.3 students from 2 classrooms studying in Semester 2, 2005 in Kaengkrowitta School. The instruments used contained; 1) 3 lesson plans of listening skills, 2) 3 sets of listening package with picture clues, 3) a VCD and a record player, 4) pre- and post-tests, and 5) the students’

self-reports after learning. The data were analyzed by the mean, standard deviation, and the description of the students' self-reports.

The results revealed that the students' post-test scores were significantly higher than the pre-test scores at the 0.05 level. The students reported that listening skill in the lessons was quite difficult but practicing by the picture clues made their lessons easier to understand especially in the long sentences.

(7)

Researcher: Mr. Chalom Torsri

Research Title: The teaching effect of error correction on English writing skill development in sentence level of Prathom 5 students.

Duration: December, 2005 – March, 2006.

Place: Chumchon BanHuayyarng School , Khonsarn District, Chaiyaphum Province

Abstract

The objective of this classroom research was to use the error correction method on English writing skill development in sentence level of Prathom 5 students studying in Semester 2, 2005 at Chumchon Banhuayyarng School, Khonsarn District. The purposive sample group in the study was 32 Prathom 5 students, got low-criterion scores of writing skill in normal class. The instruments used in this study were: 1) the pre-test with 15 sentences written in Thai, 2) 5 grammar learning lessons, 3) the post-test with 15 sentences in written in Thai, and 4) the opinion questionnaire after lessons. The data were analyzed by checking and grouping grammar errors in the percentage.

The results of the study revealed that 1) the students made 5 points of English grammar errors including nouns, pronouns, verb to be, numbers, and present simple and progressive forms, 2) after learning the grammar learning packages, the students could reduce errors in every aspect around 50% of errors made, and 3) the students reported that they could write the English sentences more correctly. The researcher felt that error method could reduce grammatical errors in class.

(8)

Researcher: Ms. Chadaphorn Camnarnmont

Research Title: Improving speaking skill through role-play activities for Mattayomsuksa 3 students.

Duration: January – March, 2006.

Place: Khonsarnwittayakom School , Khonsarn District, Chaiyaphum Province

Abstract

The purpose of this study was to improve the learning achievement on speaking skill through role-play activities for Mattayomsuksa 3 students in Khonsarnwittayakom School, Chaiyaphum Province. The target samples included 2 classrooms of 78 students studying the additional subject of listening-speaking in Semester 2, 2005. The instruments were; 1) 5 lesson plans of speaking skill through

role-play activities, 2) score checklists of activities, and 3) students' self-reports on their role-play activities. The data gained were analyzed by the 80% criterion of speaking performance, and the description of the students' self-reports.

The results were found that 60 percents of the students\ groups were achieve the criterion fixed, but all the other had to revise and replay their role-plays. However, the students reported that they had fun with their activities and they had got more experiences on speaking skill and working with their friends. It could be concluded role-play activities could support learning speaking skill and good learning attitude towards English class.

(9)

Researcher: Mr. Sriwan Tooyta

Research Title: A study of English learning achievement through the cooperative learning using the Jigsaw technique for Mattayomsuksa 5 students.

Duration: January – March, 2006.

Place: Banhunwiitaya School , Kasetsomboon District, Chaiyaphum Province

Abstract

This classroom study aimed to the use cooperative learning method using the Jigsaw technique towards English learning achievement of reading and writing skills. The target samples were purposive 2 classrooms of Mattayomsuksa 5 students learning Fundamental English course in Semester 2, 2005. The instruments comprised; 1) 5 lesson plans on cooperative learning, 2) pre- and post-tests, 3) the questionnaire to assess the students' opinions, and 4) the classroom observation. The data were analyzed by the mean, standard deviation, the t-test and description of the students' learning behaviors.

The results revealed that: 1) the students got significant higher score of the post-test than those pf the pre-test at the 0.05 level, 2) their positive opinions on learning were at the 'much' level, and 3) the students' learning behaviors were suitable, cooperative and helpful for learning reading and writing.

(10)

Researcher: Ms. Phattareeya Phromhiang

Research Title: Improving listening skill through English songs of Prathom 6 students.

Duration: January – March, 2006.

Place: Bannongpai School , Kasetsomboon District, Chaiyaphum Province

Abstract

This study aimed to improve listening skill through English songs of Prathom 6 students. The target samples were purposive 28 Prathom 6 students studying English as compulsory subject in normal classroom in Semester 2, 2005. The instruments used included; 1) 3 lesson plans of listening skill, 2) the handouts and VCD of 10 English songs and a record player, 3) the post-test after the lessons ended, and 4) the students'

self-reports on the lessons. The data were analyzed by using the score criterion of 60% in terms of the post-test scores and the description of the students' self-reports about learning English songs.

The research results were found that the half of the students could get the criterion score of 60%, but the rests had to revise the lessons and they could finally pass the criterion scores. They reported that learning English through songs made the lessons funny and interesting. Lastly, they liked the lessons and wanted to learn more for listening.

The above abstracts were the outcomes of finalizing the model, the eventual phase in the development of the language classroom research for in-service English teachers based on three major objectives in this investigation. The methods in the innovation development based on the model were summarized as Table 27:

Titles	Language skills	Innovations	Data types
1	Basic reading skill	Learning package	Quantitative
2	Integrated skill of vocabulary	Language activities	Quantitative & qualitative
3	Integrated skill of grammar	Learning packaged lessons	Quantitative
4	Integrated skill of grammar	Created materials from authentic material	Quantitative
5	Integrated skill of vocabulary	Learning packaged lessons	Quantitative & qualitative
6	Listening skill	Created learning packaged lessons	Quantitative & qualitative
7	Writing skill	Language method	Quantitative & qualitative
8	Speaking skill	Simulations	Qualitative
9	Integrated skill	Method and technique	Quantitative & qualitative
10	Listening skill	Created material of songs	Quantitative & qualitative

Table 27: The methods of innovation development of finalizing ELCR model

Table 27 indicates the outcomes of finalizing phase in developing the ELCR model. The processes of development of the English language classroom research model could be concluded that:

1) Pre - developmental stage including Phase 1: Conducting needs analysis, and Phase 2: Identifying the participants' competencies,

2) Developmental stage including Phase 3: Developing the model, Phase 4 : Assessing the model efficiency and Phase 5: Conducting the trial run of the ELCR model, and

3) Post-developmental stage comprising Phase 6: Evaluating the model, and Phase 7: Finalizing the model developed.

The prior stages affected to the participants' classroom research conducted in actual classroom situations depended on the research team's follow-ups and supervisions. The classroom research reports as the abstracts above could be varied in different methods. Developing the ELCR model according to the research purposes and processes could be traceable for one of the classroom research models concentrated in English language learning and teaching. The next chapter will discuss about the research conclusion and recommendations.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

In response to the major objectives and results of this investigation, this final chapter conclusively presents overall processes of the research methodology, results and the recommendations for further research.

6.1 Purposes of the Study

In accordance with the research designs, the purposes of this study were to:

- 1) develop the English language classroom research model for in-service English teachers;
- 2) examine the effectiveness of the developed English language classroom research model ; and
- 3) investigate in-service English teachers' perceptions and reactions on the constructed English language classroom research model .

6.2 Research Questions

In accordance with the stated purposes, three research questions included:

- 1) How could a practically and theoretically sound model of the language classroom research for in-service English teachers be developed?
- 2) How effective was the developed model of the English language classroom research for in-service English teachers?

3) What were in-service English teachers' perceptions and reactions to the new model of English language classroom research?

6.3 Research Methodology and Results

The research methodology in this investigation consisted of seven phases.

6.3.1 Phase 1: Conducting needs analysis

This phase implied a form of a research investigating the needs on a training course for in-service English teachers as the subsequent aspects:

1) Objectives

The study in this phase purposed to examine: 1) needs analysis on training skills of secondary School English teachers for developing an English teacher training course for English teachers in Chaiyaphum Province, 2) the differences of needs on training skills among different English teachers' educational backgrounds, teaching experiences, and teaching between lower and upper secondary levels, and 3) needs on training skills for secondary school English teachers from school administrators' needs and opinions.

2) Population and subjects

The population included 315 teachers in-service secondary school including 250 English teachers and 65 vice administrators working in the academic sections from the secondary schools in Chaiyaphum Province. The subjects derived from simple random sampling included 109 English teachers for quantitative data technique and 10 school vice-administrators for qualitative data. The sample size of the subjects was derived from the calculation of a probability technique. Besides, 10 vice-administrators were purposively selected which equaled 15%.

3) Instruments

The instruments used in this phase included two types as follows:

(1) A questionnaire

The questionnaire was constructed by the researcher based on Richards' (1998) scope of second language teacher education including three parts: Part 1; the respondents' statuses, and Part 2; the statements for the respondents' rating allowing five-rating scales of needs levels of the "most, much, moderate, little and least" levels. The final was the open-ended part for free suggestions of expected training. The questionnaire content included needs on a training course for in-service secondary school English teachers containing: 1) teaching approaches and instructional practice, 2) teaching skills, 3) communicative skills, 4) subject matter knowledge, 5) pedagogical reasoning skills and decision making, 6) contextual knowledge and 7) research for language learning development. 8) the contents of training models, 9) training duration, and 10) trainers. The validity efficiency of questionnaire was proven by three specialists keen on research methodology and language teaching and the Cronbach' Coefficient for the internal consistency to check the reliability alpha revealed 0.8944.

(2) A semi-structured interview

The semi-structured interview used aimed to investigate the qualitative data of interviewing 10 vice-administrators simply selected for the subjects.

3) Data analysis

The data of needs analysis from the five-rating scaled questionnaire were analyzed by using the percentage mode, and the Chi-square to check the differences of needs among different independent variables. Finally,

the data from the semi-structured interview was reviewed, interpreted and written in the description.

4) The results of the study

The results of this investigation were composed of as the followings:

(1) Quantitative data

The results revealed that English teachers needed a training course in overall domains at the 'much' level. The highest frequency of needs in the domain research development in the aspect of conducting a classroom research for language learning and teaching was found. Total aspects in each domain of needs on a teacher-training course were found to be significantly indifferent. Results from training models, duration, and trainers for a training course were found that English teachers needed the model of workshop session within 3 – 5 days by trainers from the English Resource Instruction Center.

(2) Qualitative data

The qualitative data method revealed that secondary school vice-administrators accepted a teacher training project and viewed that it was essential to improve English language teaching and learning. The most necessary for improving language learning achievement was classroom research development for language learning, and English teachers' skills language for teaching.

6.3.2 Phase 2: Identifying the participants' competencies

This phase was a form of research to investigate the participants' competencies in English language classroom research and needs on training. The method of the study was presented as follows:

1) Objectives

This study purposed to: 1) study and compare perceived classroom research knowledge and understandings, 2) study and compare needs on training of classroom research and the model of a training course, and 3) propose an appropriate model of training on classroom research based on a group discussion technique and the semi-structured interview.

2) Population and subjects

The populations were 423 teachers including 267 English teachers and 156 vice-administrators working in the secondary school in Chaiyapahum Province. From the populations stated, the overall subjects derived from simple random sampling were 152 cases comprising 122 English teachers for quantitative data, 15 English teachers from a group discussion, 15 interviewees comprising 12 deputy-directors responsible for academic affairs, and three experts of classroom research for qualitative data. The exact number of 122 English teachers was obtained from the probability calculation of 0.05 confidence interval, variance of 1.0 and the error estimation of 0.15. But for the qualitative data, the exact numbers were obtained from the purposive technique which aimed to gain the data of the participants' competencies and needs on training of language classroom research.

3) Instruments

The research instruments used in this study included:

(1) A questionnaire

The questionnaire constructed by the researcher was once again a five-rating scale containing the participants' competency levels of classroom research and needs on training of language classroom research. The questionnaire as earlier stated

comprised of three parts of participants' statuses, with five levels of knowledge – understandings and needs concerning a training course with the “most, much, moderate, little and least” levels, and the final sub-part of open-ended opinions covering models, duration, and trainers of the training course. The efficiency of the questionnaire was checked by the thesis pro-advisor and three specialists. For its validity, each item was checked by the t-test to ascertain the discriminated differences of the participants' opinions. Moreover, the reliability was additionally checked by the Cronbach' Coefficiency revealed 0.9040 in the participants' competencies and 0.9266 in needs on classroom research training. The reliability value of the whole paper of the questionnaire revealed 0.8810.

(2) A group discussion

This technique was used with 15 English teachers working in the secondary schools.

(3) A semi-structured interview

This technique was conducted with 15 vice-administrators working in the academic sections in the secondary schools as the interviewees. The last two techniques were to investigate the participants' competencies and needs on training of the classroom research in the actually current situations.

The efficiency of the two qualitative techniques was proven by three specialists keen on the educational research and language teaching.

4) Data collection and analysis

The data were collected by the researcher in terms of the qualitative data and the assistant researchers helped collect the quantitative data using the questionnaire. Finally, the data from the questionnaire was analyzed by the

percentage, percentage mode, and the Chi-square to check the differences of the participants' knowledge – understandings and needs on the English language classroom research at the 0.05 significant levels.. In terms of qualitative data, they were analyzed by interpretation and description.

5) The results of the study

The results of the study in this phase revealed as follows:

1) The subjects' perceived their knowledge and understandings in every item at the level of the "moderate" level. Differences between male and female, among working duration, experiences of doing the ELCR were not significantly found. But differences between two types of school, and experiences training in the English language classroom research course were significantly found at the 0.05 level.

2) In terms of needs on a training course, it was found that the needs on a training course of English language classroom research in every aspect were at the "much" level. While differences of needs between male and female, among working duration, between two types of school, and experiences of doing the ELCR were not found differently. Except for differences of needs between experiences of the ELCR training course, they were significantly found at the 0.05 level.

3) The qualitative data derived from both the secondary school EL teachers' group discussion and interviewees on English language classroom research, wholly viewed that there should be a specific curriculum of the ELCR with a certain method, process, report format, and research resources to propose the educational authorities. Besides, examples of research reports on the ELCR, research consultants should be provided while undertaking a training course or conducting the ELCR. Lastly, the model of an anticipated training course should be a workshop session

within one to two day training in each session of practices. For the trainers, the subjects proposed that experienced researchers in the field of ELT should be provided.

6.3.3 Phase 3: Developing the ELCR

The needs analysis and the study problems and resolutions in the two earlier phases became traceable for the development of the English language classroom research in this study. This phase was adapted from Roberts' (1998) Richards' (2001) on in-service training and language teaching is guided in two sub-parts, that is to say:

1) Designing goals and learning outcomes of the ELCR model

In the design (planning), the researcher made decisions of the goals and objectives; selection, sequencing, weighing and the integration of the program elements. The aims were to 1) provide a clear definition of the purposes of the program, 2) set the guidelines for trainers, trainees, and materials, 3) help provide a focus for instruction, and describe important and realizable changes in training.

2) Curriculum planning and syllabus design

Based on educational philosophy, previous information, current situations, problems and trends of ELT and research promotion in Thai local area settings, the following dimensions of developing the English language classroom research model in this step were composed of: 1) a course rationale, 2) issues and aims in the classroom research, 3) the methods of in-service teachers' development, 4) the structure of the curriculum model, and 5) the guidelines for the evaluation of English language classroom research.

3) Participants

Six specialists assessed the content validity of the English language classroom research model. Three of the specialists, specialized in classroom research

methodology as indicated by their degrees of education and teaching experiences in the undergraduate and graduate students, whilst the other three specialists were keen on English language teaching and had the same qualification as in the previous one. The results from the specialists' checks were to improve the curriculum contents of training and English language classroom research.

4) Instruments and analysis

The instrument used in this step was an evaluative form for the congruence, content, design, utility and feasibility of the model designed. The specialists evaluated every element of the curriculum design, language classroom research, adapted from Dick, Carey and Carey's (2001) and the language used in developing the curriculum. Moreover, they suggested the components of the English language classroom research model that should have been corrected or improved.

The analysis covered the specialist' opinions, suggestions, and comments in the evaluative form and open-ended part to analyze the value of Index of Objective Congruence: IOC. It was to prove the congruence of the model contents so that the results could be guidelines for further improvements.

5) The results of the analysis

(1) The outcomes of the development

The development of the English language classroom research model aimed to have two characteristics; 1) a self-development package and 2) a model for a training workshop based on the purposes of the training projects. The developmental outcomes included eight modules of English language classroom research model as follows: 1) Identifying background knowledge, 2) Basic elements; 3) Review of related literature, 4) Innovation development, 5) Designing ELCR, 6) collecting data,

analyzing the data, and 8) reporting, summarizing, and interpreting the results.

(2) *The outcomes of the specialists' checks*

2.1) The contents of the ELCR model were appropriate and acceptable due to the statistical value of the IOC equaled 0.83 – 1.00.

2.2) The language used in writing the model was found appropriate and acceptable for English language teachers. The IOC values proved by three specialists were between 0.66 -1.00 (two-thirds of the specialists' opinions).

2.3) Finally, more suggestions of the specialists guided the researcher to correct and make the ELCR more complete in terms of the ELCR components.

6.3.4 Phase 4: Assessing the efficiency of the ELCR model

1) Subjects for assessing the ELCR model

The subjects included: 1) three English teachers purposively selected for single experimental assessment, 2) ten English teachers purposively selected for a small group for the 2nd experimental assessment and 3) 36 secondary school English teachers simply randomized for the experiment of Phase 4. The last group was from the populations of 157 English teachers working in Chaiyaphum Educational Service Area Office 1, specifically in Muang and Nongbuadang Districts. The subject numbers were calculated by the probability estimation. The main subject group was 36 teachers to participate the training workshop which was officially permitted by the Chaiyaphum Educational Service Area Office 1.

2) Instruments

The instruments used to assess the curriculum in this step were composed of: 1) the pre- and post-tests of knowledge and understanding of language classroom research with 61 items and the test items accompanied after the module, 2)

the checklist for opinion assessment covered five-rating scales with the training content difficulty and the subjects' understanding. The number of its items was based on the content of each ELCR module. 3) the observation form to assess the subjects' behaviors during training, and 4) the semi-structured in-depth interview to assess the training process during and after the training project. The efficiency of those instruments was checked by the specialists stated in Phase 3. Moreover, the pre- and post-tests for the experimental subjects were proved in terms of the test items and analyzed by using the Analysis Item System (IAS) developed by Kaimook (2002). This process was to find out the quality in terms of the discrimination, difficulties and reliability using the KR-20.

3) Data collection

The data collection and analysis included the Pre- experimental Design (O 1 X O 2) used for the experiment of assessing the instruments efficiency. The procedures were composed of:

(1) the subjects under taking a pre-test before training and a post-test and opinion checklist after training activities,

(2) 3 subjects for single experimental assessment were carried out for one/one model,

(3) 10 subjects for a small group were carried out for one/one model, 4) 36 subjects for the field experiment were carried out by the process of the Reflective Model for arranging the training workshop.

(4) From steps 1, 2 and 3, the data were analyzed by using the efficiency calculation of the criterion based on Brahmawong's (1993) formula of $E1/E2$ for 75/75 criterion.

(5) In addition, the checklist for opinion assessment was used after the training session; the data were analyzed for its reliability and internal consistency by Cronbach's formula.

(6) Finally, the observation form and the semi-structured interview were interpreted and used to assess the efficiency of the ELCR model.

4) Data analysis

The method of analysis comprises:

1) The test-items were analyzed by the Item Analysis System to find out the quality in terms of the discrimination (r), the difficulty (p) and the internal consistency of the test.

2) The E1/E2 model analyzed the data from experimental assessment from the single, small group, and field experiments. The assessment procedure was to compare the difference of scores from the pre-test, the assignments during training and the post-test scores of knowledge and understanding of English language classroom research. The t-test for two related samples was used.

(3) In addition, the scores of opinion assessment after the training session, the level of rating scale was interpreted.

(4) The data from the observation form and semi-structured interview during and after the training sessions were interpreted and described to explain the results of assessing the project.

5) The results of assessing the model efficiency

(1) The test item values of the pre- and post-tests proved by the Item Analysis System were revealed appropriate in 41 items. The others were the re-tested

and improved and after the first and second analyses, were found to be appropriate. Finally, the internal consistency of KR-20 was found 0.78.

(2) The results of the E1/E2 analysis in the one/one, small group and large group experiments were revealed at the expected values of 75/75.

(3) The results from assessing the ELCR model of every module revealed that the trainees or participants expressed and rated their opinions on the difficulty of ELCR model at the 3-4 levels which was meant moderate and difficult. While, their understandings of the ELCR model presentation, revealed at the 4 or much level.

(4) Lastly, the assessment from the semi-structured observations and interviews were conducted and can be concluded that the participants were very enthusiastic and attentive in participating and conducting every activities in every module. They also perceived that the English language classroom research was very valuable for English language learning and teaching. Nevertheless, they felt that the English content of the ELCR model was quite difficult. If they had to conduct the classroom research, they required the school administrators supported and the expertise of supervisors to closely assist them design their classroom research.

6.3.5 Phase 5: Conducting the trial run of the ELCR model

In this phase, the researcher prepared the trial of the developed ELCR model by organizing the training workshop to find out its efficiency due to the implementation in the previous phase. The procedures are discussed as follows:

1) Subjects

The subjects contained 54 secondary English teachers systematically selected by the statistical probability technique from the population of 166 teachers

working under the jurisdiction of Chaiyaphum Educational Service Area Office 2 in the 2005 Academic Year.

2) Research instruments

The instruments used in the actual conduct of the training course in the present study consisted of the followings: 1) the contents of English language classroom research including training activities, handouts and exercises for the participants, 2) the pre- and post-tests of knowledge and understanding of classroom research, 3) the questionnaire of opinion assessment to evaluate before and after the training activities of ELCR model, 4) observation form for the researcher to observe and take note on what and how trainers act before, during and after the training activities, and 5) the semi-structured interview to assess the processes of training sessions.

3) Data collection

In this step, the researcher implemented the ELCR model developed and supplemented from the experimental phase and additionally conducted as: 1) studied the ELCR model developed containing trainer's manual, materials, and participants' handouts of training activities, 2) contacted the ERIC Center in Kaengkrowittaya School, Chaiyaphum Educational Service Area Office 2 and sent its letter to inform the subjects to participate the training workshop, 3) organized the training sessions for 2 days, and 4) invited the guest trainer to provide a lecture on the background of the research. The researcher also worked as the trainer and evaluator until the training project became completed.

4) Data analysis

The data gained during the training session were analyzed as: 1) the

score differences of pre- and post-tests before and after the training sessions on English language classroom research were analyzed by using the t-test, 2) the scores of opinion assessment after the training session were also analyzed by the percentage mode and interpreted, 3) the data from the semi-structured interview and the observation form were interpreted, described in words, and concluded by the percentage, if the data are in numbers.

5) The results from conducting the trial run of the model

The results of this phase were that:

(1) the participants' achievements in learning were successful due to the significantly higher scores of the post-test than of the pre-test at the 0.01 level,

(2) the participants perceived the ELCR model in every module were quite difficult in terms of the language use,

(3) the participants also perceived that they could understand presenting the module at the "moderate" level, the semi-structured interview indicated that they felt satisfied with the training session on the ELCR model, but the ELCR contents seemed quite difficult for them. They reported that they could do the classroom research provided that they received assistance from the supervisors and the school administrators and encouragement to conduct the research, and the semi-structured observations indicated that the participants were very enthusiastic, willing to take part in the training workshop and conducting activities; while they still felt worried and frustrated in actual practices in their workplaces. Their behaviors implied that they felt satisfactory and hopeful in the coming classroom research for their professionals.

6.3.6 Phase 6: Evaluating the English language classroom research model

This step was to evaluate the English language classroom research model as stated in the objectives of the present study. The study procedures included:

1) Subjects

The subjects of this phase included 36 trainees from the study in Phase 4 of the model assessing and 54 trainees from the study in Phase 5, the model trial.

2) Methods

To evaluate the ELCR model, the followings of evaluative methods and instruments used includes:

(1) The evaluative model

The model designed in this phase to evaluate the projects covered two groups of participants trained in Phase 4 and 5. The efficiently evaluative framework based on the criteria aimed to use in this project consists of: 1.1) participants' reactions, 1.2) participants' learning outcomes, 1.3) participants' behaviors, 1.4) project results and 1.5) language proficiency improvements

(2) Evaluative instruments

1) The five-rating scaled questionnaire and the open-ended parts for any issues and suggestions. The researcher had the participants rate and write up the problems they encountered and their suggestions after the completion of the training project, and

(2) The semi-structure observation form and the participants' self-reports for evaluating the training project conducted and analyzed by the researcher and assistant researchers,

For the five-rating questionnaire efficiency, the content validity was

checked by the research specialists, and by using the t-test to check the differences of the participants' opinions. If the item value revealed significant difference, that item was proved to be efficient. The reliability of the questionnaire from the Cronbach's alpha Coefficient measured from Phase 4 revealed 0.967.

3) Data collection and analysis

The data were collected while conducting the training session in Phase 4: Assessing the model and Phase 5: Trialing the model. Besides, the data analysis included the follow procedures:

(1) The efficiency of the five-rating scaled questionnaire was analyzed by using the t-test and the data gained were analyzed by the highest mode of percentage and interpreted by the description of each domain in the evaluation.

(2) The semi-structured observation and the participants' self-report were analyzed, interpreted, and described in words.

4) The results of evaluating the training projects

The results of the project evaluation from Phase 4 and Phase 5 were conclusively presented as follows:

(1) The evaluative results in terms of the participants' reactions were found at the 'much' level.

(2) The participants learning outcomes were at the 'moderate' and 'much' levels. In case of learning achievements, it was found that the participants' post-test cores were significantly higher than those of the pre-test scores at the 0.01 level.

(3) The participants' behaviors towards the process of training were at the 'moderate' and 'much' levels.

(4) In the domain of training project results, they were found at the 'much' and 'very much' levels.

(5) The participants perceived that their language proficiency improvement revealed the highest mode percentage at the 'moderate' and 'much' levels.

(6) Moreover, the participants made more comments about the training surroundings, the quite difficult language used in the training curriculum, the training duration, and the speed of presentation.

(7) Finally, The evaluative results from the semi-structured interview and the participants' self reports revealed that the participants were enthusiastic and willing to take part in training. They reported that the ELCR model was quite difficult but worthy and helpful for language teachers. If they had to conduct the classroom research, to get through the research conducts, there should have been the supervisors keen on the classroom research to help them while conducting.

6.3.7 Phase 7: Finalizing the English language classroom research model

This phase aimed to finalize the ELCR model to verify the efficiency of the English language classroom research model conducted as the following procedures:

1) Subjects

The subjects of this phase were a purposive selection sampling from the overall subjects in Phase 4 of the assessing and Phase 5 of the trialing of the ELCR model. They included 10 English teachers who had completed the training workshop of the trial phase. The researcher had them volunteer to take part in this phase.

2) Methods

To finalize and evaluate this phase, the researcher chose to use the action research method. The major procedure concisely comprised of 1) Planning, 2) Acting, 3) Observing, and 4) Reflecting. The mentioned procedures were as follows:

(1) Planning - Developing a plan of the action

After the training workshops in Phase 4 and Phase 5, the researcher allowed the voluntary teachers apply for the research network for the language classroom research, in areas that they had found to be problems in their actual classrooms.

(2) Acting - Act to implement the plan

The researcher had the subjects take part in the meeting and discussed writing up their classroom research proposals to present to the school administrators. The researcher allowed the participants construct their own instruments. After the instruments were completed, the researcher and other specialists proved the content validity.

(3) Observing – Observe the effects of action in the context

During this step, the participants tested their instruments after analyzing and proving the reliability of the tests or the questionnaires. The participants used those complete instruments to collect the data in the actual classroom. The researcher and the team observed them during the research conduct.

(4) Reflecting – Reflect on these effects

After collecting data, those teachers analyzed, interpreted and then wrote up their classroom research reports. At this time the researcher let them reflect what problems they had faced occurred during their research work.

3) Data collection and analysis

Collecting data included the qualitative technique as the followings:

(1) The instruments used comprised the record of the participants' opinions (reflection), and the observation report of the researcher.

(2) The evaluation form consisting of the self-evaluation form for the subjects and the other form for the researcher to evaluate the subjects' research reports.

(3) Lastly, the researcher had them present their classroom research in the final project meeting at the ERIC Center at Kangkrowittaya School, Chaiyaphum Educational Service Area Office 2. Additionally, if there were some more chances, take them to present in the ELT seminar or workshop.

The data analyses were consisted of conclusion, interpretation and then reported in the descriptive method.

4) The results of finalizing the model

The results of the training sessions in Phase 4 and Phase 5 were derived from research conducting during early January to March, 2006, Semester 2 of 2005 Academic Year until May and June, Semester 1 of 2006 Academic Year. The results were the participants' performances in conducting the classroom research.

(1) In the planning step, the researcher invited the participants to take part in the project of the research conduct and planned to write up the research proposals, documents, and the computer software for guiding the participants for data analysis.

(2) In the acting step, the researcher organized the meeting for conducting the classroom research. The researcher supervised the participants to write

the proposals, construct the instruments, help check the instrument quality, collect and analyze the research data, and how to write the reports.

(3) In the observation step, the researcher observed the participants conducting the research as well as collecting data in their classrooms. The participants could conduct their research tasks, but they required the researcher's supervisions.

(4) In the reflection step, let the participants reflect on their problems whilst on conducting the classroom research. Then, the researcher reflected on the participants' research tasks. In reflecting the research tasks, it was found that most of the processes of the participants' research conducts were 'appropriate', but in some points, the participants had to improve their research tasks.

Finally, ten participants could achieve conducting the classroom research in various English skills of language teaching.

6.4 Recommendations

6.4.1 Recommendations for the present investigation

1) There should be the English language classroom research in Thai version for English teachers working in the rural areas for more easily actual practices because generally classroom research seems to be difficult for teachers, so Thai version of the ELCR model may be easier in real practices.

2) The training duration within two days of the two projects seemed to be short terms in training. There should be a time extension for training so that the participants could gradually learn and practice more and be able to conduct the classrooms research better than in the two-day time.

3) The researcher as a role on the presenter of the training workshop might be uninteresting for the participants, so there should be the lecture team so that the lessons on training might be more interesting.

4) The lessons on the ELCR module should be separated in each module and more illustrations and the bigger alphabets typed in the contents should be designed so that it might be more convenient and interesting. The model lessons could additionally motivate the participants in the training workshop.

6.4.2 Recommendations for further research

1) The English language classroom research should be further studied through computer-based instruction (CAI) or web-based instruction for English teachers to evaluate the model quality in terms of self-access learning.

2) There should be further research by using training lessons on English language classroom research for English teachers in other official sectors.

3) Before the next training of teachers, the ELCR model in this study should be simplified so that teachers could learn and conduct the research more easily.

4) In the further research, the EELCR model in this study should be adapted and written in Thai language in terms of the pre- and post-tests, and the handouts for the training participants.

6.4.3 Recommendations for implementation

1) The outcomes of developing the English language classroom research model can be adopted for in-service English teachers' teaching and classroom research for professional development.

2) The lessons from the English language classroom research can be applied for the classroom research lessons in the undergraduate classes of

English major students or pre-service teachers.

3) The English language classroom research model from this study should be constructed to be web-based learning lessons for English teachers' self-development.

4) In actual practices of using the ELCR model, the trainers should have the trainees study within an appropriately longer time both in individual and group works.

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Structure of an English Language Classroom Research Model

1. Rationale:

As the pressure to communicate in ‘the age of communication’ increases, the divisions of language are felt even more noticeably. So language teaching, which is seen as international channels of communication, becomes even more important. Similarly, with the explosion in language teaching, there has been an increased demand for language teachers and the consequent needs to train those teachers. Thus, language teachers find themselves in the position of being trainers of language teachers or in some way responsible for the professional development of language teachers. Parallel with an educational change, there has been the growing feeling that language teaching professionals can, and must take on the responsibility for teacher development. Language teaching and teacher education are essential components for teaching to be considered as a worthy ‘profession’ and teachers have to consider themselves as ‘professionals’ (Wallace, 1991:2).

Central to language teachers’ professional concerns knows what happens in the classroom and how that knowledge can feed back into teaching and maximize language learning. Professional in-service programs for language teachers have in recent years drawn on educational research processes which focus teachers’ attention on their own teaching and learners’ performance. Language teachers are increasingly becoming experienced in research processes and many are active roles in designing, implementing, and evaluating language curriculum and learning processes. They are frequently supported in this by their own school or educational unit, since institutions, rather than systems, are now encouraged to manage local teaching-support needs. (Burton’ 1994:II)

Second or (foreign) language classroom research is research that is carried out in the language classroom for the purpose of answering important questions about the learning and teaching of foreign languages. This kind of research derives its data from either genuine foreign language classrooms (classroom specifically constituted for the purposes of foreign language learning and teaching) or in experimental laboratory settings that are set up for the purposes of research. These experimental settings are sometimes established to replicate or recreate what happens in language classrooms, although more often than not laboratory settings make no pretense at such replication. (Nunan, 1990: online)

2. Issues and aims in English language classroom research:

2.1 Issues:

1) Classroom research focuses on teachers or learners, or on the interaction between teachers and learners as the classroom decision-making processes of teachers, and what is referred to as teacher talk. Teacher talk encompasses the kinds of questions that teachers ask, the amount and type of talking that teachers do, the type of error correction and feedback that teachers provide, and the speech modifications teachers make when talking to second language learners.

2) Research focuses on the learner, for example, the developmental aspects of learner language, the learning styles and strategies used by different learners, the type of language prompted by various types of materials and pedagogic tasks, the classroom interaction that takes place between learners, and the effect of this interaction on learner language development.

2.2 Aims:

2.2.1) To describe and predict the stages that learners pass through in acquiring a second language, and to identify the process through which learners acquire the target language.

2.2.2) To identify the pedagogic variables that may facilitate or impede acquisition.

2.2.3) To examine, in greater depth than what is done in the core ‘Research Methods’ course, some of the instruments and methods used in classroom-related data collection: questionnaires, interview schedules, classroom observation schedules, (and ethnographic alternatives), diaries, repertory grids, and stimulated introspection instruments.

2.2.4) To gain practical experience in using some of these methods, particularly classroom observation, to collect, analyze and write up data.

2.2.5) To self-develop of teachers as researchers that can facilitate educational institutions.

3. Methods of in-service teachers’ development

For the training model in this project, the ‘Reflective Model’ is adopted and adapted for practical training modes in Phase 4: Assessing the efficiency and Phase: 5 Conducting trial run of the English language classroom research model as the following design:

Stages of a reflective model	Applied training modes
<p>Stage 1: Pre-training stage, i.e. the stage, which the person who has designed to undertake professional training or development is at before beginning that process.</p>	<p>1. Trainees’ existing conceptual schemata or mental constructs:</p> <p>1.1) Pre-test of LCR knowledge</p> <p>1.2) Survey of trainees’ opinions on LCR</p>
<p>Stage 2: Professional education or development:</p> <p>2.1 Received knowledge</p> <p>2.2 Experiential knowledge: ‘Reflective cycle’</p> <p>1) Practice</p> <p>2) Reflection</p>	<p>2. Acquisition: Designing how trainees can be acquired from various sources, i.e. books, handouts, discussions, brainstorming or by questions and answers.</p> <p>3. Reflection:</p> <p>3.1) Deep processing, in which the trainees develops an understanding of essential underlying meaning of the new knowledge.</p> <p>3.2) Active processing, in which the trainee relates to the new knowledge to the previous knowledge and experience</p>

Stages of a reflective model	Applied training modes
Stage 3. Goal: Professional competence	<p>4. Application: Trainee applies new knowledge to the solution of practical problems.</p> <p>5. Evaluation:</p> <p><i>5.1) Trainee evaluation of content and process</i>, in which the trainee evaluates the new information which she has received and how it has been presented. How valid or useful is it?</p> <p><i>5.2) Assessment:</i> The assessment procedures should reveal to the trainees and the tutor how far the course objectives have been achieved by each individual trainee.</p> <ul style="list-style-type: none"> -Post-test -Post-survey of trainees' opinions

4. Structure of an English language classroom research model (ELCR)

Contents and experiences notified in this language research curriculum model for in-service English teachers which will be tried out for the model efficiency are classified into eight parts: The details for the training workshop are as follows:

Model of English Language Classroom Research	Duration of training session
<p>1. Identifying background knowledge of English language classroom research</p> <ul style="list-style-type: none"> 1.1) Definition 1.2) Scope 1.3) Use 1.4) Characteristics 1.5) Process 1.6) Limitation 	1.5 Hours
<p>2. Basic elements of English language classroom research</p> <ul style="list-style-type: none"> 2.1) Major issues 2.2) Evaluating and developing research problems 2.3) Variables 2.4) Hypothesis 	1.5 Hours
<p>3. Review of related literature in English language classroom research</p> <ul style="list-style-type: none"> 3.1) Definition and characteristics 3.2) Objective, importance and selection of related literature 3.3) Writing the report of related literature 3.4) Referencing 	1.5 Hours

Model of English Language Classroom Research	Duration of training session
<p>4. Innovation development in English language classroom research</p> <p>4.1) Definition and characteristics 4.2) Category of innovations 4.3) The role and development of instructional innovations 4.4) Example cases of innovation development</p>	1.5 Hours
Model of English Language Classroom Research	Duration of training session
<p>5. Designing an English language classroom research</p> <p>5.1) Quantitative research: experimental designs -Definition -Major components of experimental research -Single group designs -Quasi-experimental designs 5.2) Qualitative research in L2 classroom research -Definition and major characteristics -Why do we need to do qualitative research? -Conducting a qualitative research in L2 classroom</p>	1.5 Hours
<p>6. Collecting data</p> <p>6.1) Determining what constitute data 6.2) Procedures of collecting the data in quantitative research 6.3) Description of data collection procedures 6.4) Procedures of data collection in qualitative and quantitative research typical uses in classroom research -Interviews - Record reviews -Diaries - Observations - Verbal reporting - Questionnaires -Tests 6.5) Issues and problems in collecting language data 6.6) Assuring the quality of the data and the data collection procedures -Reliability -Validity</p>	1.5 Hours
<p>7. Analyzing the data in English language classroom research</p> <p>7.1) Definition and techniques 7.2) Analyzing qualitative research data 7.3) Analyzing descriptive research data 7.4) Analyzing experimental research data -The t-test -The Chi-square -Using the computer for data analysis</p>	1.5 Hours

Model of English Language Classroom Research	Duration of training session
8. Reporting, summarizing, and interpreting the results 8.1) Reporting and summarizing 8.2) Interpreting the results 8.3) Reporting research -Types of reports -The components of research reports -Closing the research cycles	1.5 Hour
Total	12 Hours

5. Training evaluation of an English language classroom research model

- 1) Evaluation of knowledge and understanding of the language classroom research, evaluated by the pre- and post-tests.
- 2) Evaluation of trainees' opinions on participating in the training workshop by the questionnaire.
- 3) Observation of participating training activities, and discussions.

5.2 Criteria of the training completion

- 1) Participation of the activities in the workshop at least 80% of the training duration.
- 3) Results from the evaluation of knowledge and understanding by the post-test score at least 70%.

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**Pre-test of Self-development of English language classroom Research
for In-service English Teachers**

Directions: 1. This test aims to evaluate the learners' knowledge before self-development

or training on English language classroom research.

2. This test consists of four multiple-choices of items.

3. Mark an X of the correct answer on the answer sheet.

<p>1. Which is <u>the best definition</u> of English language classroom research?</p> <p>A. The research a teacher conducted to prove classroom achievements and theories on language learning and teaching.</p> <p>B. The research a teacher conducted to prove new classroom theories and language teaching.</p> <p>C. The research a teacher conducted for teacher's academic professional of language learning and teaching.</p> <p>D. The research a teacher conducted for problem solving and implementing achievements in language classrooms.</p>
<p>2. What is the <u>main objective</u> of English language classroom research?</p> <p>A. It is to prove classroom language achievements and theories.</p> <p>B. It is to prove new classroom theories and language teaching.</p> <p>C. It is for problem solving and implementing achievements in language classrooms.</p> <p>D. It if for teacher's academic professional of language learning and teaching.</p>
<p>3. Which <u>is not the definite scope</u> of English language classroom research?</p> <p>A. The development of interlanguage in classrooms.</p> <p>B. The development of language teacher professional.</p> <p>C. The English language classroom communication and interaction..</p> <p>D. The language learning strategies and classroom evaluation.</p>
<p>4. Which one is <u>the most suitable</u> benefit of English language classroom research?</p> <p>A. The data for language curriculum development.</p> <p>B. The instrument for language teacher professional development.</p>

<p>C. The development of language learning and teaching.</p> <p>D. The advancement of language and educational research.</p>
<p>5. Which statement <u>is not</u> one of the characteristics of English language classroom research?</p> <p>A. It is a learner-centered research approach.</p> <p>B. It is a teacher-directed research approach.</p> <p>C. It is a collaborative research approach.</p> <p>D. D. It is an innovative research approach.</p>
<p>6. Which process is to find out a means for the inquiry of English language classroom research?</p> <p>A. Beginning process</p> <p>B. Developing the questions.</p> <p>C. Data collecting process</p> <p>D. Analyzing data process</p>
<p>7. Which is <u>not one of</u> the limitation of English language classroom research</p> <p>A. It cannot promote teacher professional.</p> <p>B. It cannot be inferred for the population.</p> <p>C. Teachers lack of time and expertise.</p> <p>D. It is a context-dependent inquiry.</p>
<p>8. The following choices are major issues in English language classroom research, except</p> <p>A. teacher's instruction and behavior.</p> <p>B. learner's behavior.</p> <p>C. teacher's curriculum and instruction.</p> <p>D. classroom interaction</p>
<p>9. Which is not one of the issues of evaluating the problem of English language classroom research?</p> <p>A. Learner language learning achievement</p> <p>B. Learner language development features.</p> <p>C. Learner language interaction</p> <p>D. Learner tasks and strategies</p>
<p>10. Which stage should be considered before the stage of considering issues the</p>

<p>problems concern?</p> <ul style="list-style-type: none"> A. The stage of “What are the problems?” B. The stage of selecting problem issues. C. The stage of developing research questions. D. The stage of analyzing the research problems.
<p>11. Which situation is an output analysis of a systematic approach?</p> <ul style="list-style-type: none"> A. A teacher of English used inappropriate summative test. B. A teacher of English does not usually use the teaching materials. C. Most of M.2 Students ignored practices and doing class assignments. D. M.2 Students got lower achievement scores than the 60% criterion.
<p><u>Direction: The following situation is for the questions No. 12-15: -.</u></p> <p>“Does an error analysis of a teacher correction by assigning tasks improve M.3 Student’s writing skill?”</p>
<p>12. For the sentence in the quotation, what do we call in the classroom research?</p> <ul style="list-style-type: none"> A. A research problem analysis B. A research question C. A research hypothesis D. A systematic approach
<p>13. What is the independent variable of classroom research?</p> <ul style="list-style-type: none"> A. An error analysis of a teacher correction B. A teacher correction by assigning tasks C. An error analysis of a teacher correction by assigning tasks D. M. 3 Students’ writing skill
<p>14. What is the dependent variable of classroom research?</p> <ul style="list-style-type: none"> A. M. 3 Students’ writing skill B. An error analysis of a teacher correction C. An error analysis of a teacher correction by assigning tasks D. A teacher correction by assigning tasks.
<p>15. What is not true about research hypothesis?</p> <ul style="list-style-type: none"> A. It is a tentative answer to a research problem. B. It is the relation between the independent and dependent variables. C. It is strictly designed in an experimental research.

D. The researcher has to design it in every type of research.
18. When should the related literature be studied in different stages? A. Before the research problems or questions. B. After the research problems or questions. C. Before setting the research objectives. D. After limiting the research methods.
19. Which <u>is not a criterion</u> of selecting the related literature? A. The author not having any experiences. B. The abreast of the times for the research conducted. C. Correct, clear, and sufficient pictures, tables, graphs or maps D. Easy, reasonable, unbiased language use, and sufficient references
20. Which <u>is not a principle</u> of writing the report for related literature? A. Integrate different related literature into harmonious contents. B. Outline the related literature in different topics. C. Report and discuss only relevant research results. D. Report and discuss relevant and contrasting research results.
21. Which <u>is true</u> according to writing the report for related literature? A. Report from the previous research abstracts. B. Report from the year of printing in each paragraph of contents. C. Select only the relevant report for the research objectives. D. Synthesize different results into the harmonious contents.
22. Which <u>is not</u> the objective of review of related literature? A. To find out the research title. B. To find out the suggestion for the research implication. C. To find out the research methods. D. To find out the research hypothesis.
23. What are the components of the research citation? A. Author / year of printing / and page No. B. Author / year of printing / and publisher. C. Author / publisher / and page No. D. Author / publisher / and place of printing.
24. Which statement <u>is not</u> the definition of innovation in ELT??

<p>A. Proposals for qualitative change in pedagogical materials.</p> <p>B. Proposals for qualitative change in pedagogical approaches.</p> <p>C. Proposals for qualitative change in pedagogical values.</p> <p>D. Proposals for qualitative approaches or values of individuals.</p>
<p>26. The following are the principal attributes of the ELT innovation <u>except</u></p> <p>A. Teacher's initial dissatisfaction.</p> <p>B. Printed and non-printed materials.</p> <p>C. Feasibility for teacher's work.</p> <p>D. Acceptability for teacher's teaching style.</p>
<p>27. What is the innovation based on instruction and teacher talk?</p> <p>A. Authentic and created materials.</p> <p>B. The innovation depended on learning styles.</p> <p>C. The innovation based on learners' motivation.</p> <p>D. Self-access learning through teacher's support.</p>
<p>28. Which of the following is the teaching and learning process innovation?</p> <p>A. Printed and non-printed materials.</p> <p>B. Authentic and created materials.</p> <p>C. The cooperative learning model.</p> <p>D. Content-based instruction and curriculum.</p>
<p>29. What is the first step of the innovation development?</p> <p>A. Framing the learning process.</p> <p>B. Developing learning objectives.</p> <p>C. Developing innovative models.</p> <p>D. Trialing the innovative models.</p>
<p>30. What is the most important step before the innovations are used?</p> <p>A. Framing the learning process.</p> <p>B. Developing innovative models.</p> <p>C. Trialing the innovative models.</p> <p>C. Assessing the efficiency of innovation.</p>
<p>31. What aspect <u>can be derived</u> from framing the efficiency criterion?</p>

<p>A. Continual behavior and final behavior.</p> <p>B. Continual behavior and process behavior.</p> <p>C. Process behavior and learning behavior.</p> <p>D. Behavior before learning and process behavior.</p>
<p>32. Which <u>is not an innovation</u> development for classroom experiment?</p> <p>A. A construction of a supplementary book for reading short stories.</p> <p>B. Improving reading skills by a short folk tale.</p> <p>C. The study of M.2 Students' English learning styles.</p> <p>D. Improving writing skills by using an error analysis of peer correction.</p>
<p>33. What is the main purpose of the research designs?</p> <p>A. It is easy to collect research data.</p> <p>B. It is to control dependent and independent variables.</p> <p>C. For organizing and planning the experimental instruments.</p> <p>D. To reveal the exact results and control some variables.</p>
<p>34. Which <u>one is not</u> one of the components of experimental research?</p> <p>A. The type and number of groups</p> <p>B. Heuristic or hypothesis-generating</p> <p>C. The treatment</p> <p>D. Measurement or observation</p>
<p>35. Which experimental design is usually conducted in classroom research?</p> <p>A. X O</p> <p>B. O1, O2, O3, On...X, On + 1, On + 2</p> <p>C. O1 X O2</p> <p>D. Group 1: O1 X O2 Group 2: O3 X O4 Group 3: O5 X O6</p>
<p>36. What is the purpose of <u>qualitative research</u> in L2 classrooms?</p> <p>A. To study and interpret phenomena in natural contexts.</p> <p>B. To study and make up some theories.</p> <p>C. To study the effect of independent variables.</p> <p>D. To study the theories of dependent and independent variables.</p>
<p>37. Which <u>is not true</u> about major characteristics of qualitative research??</p> <p>A. Do in natural settings.</p> <p>B. Researcher as a key instrument of data collection.</p>

<p>C. Data analyzed by statistical techniques.</p> <p>D. Data collected as words or pictures.</p>
<p>38. Which <u>is true</u> about heuristic or hypothesis-generating research?</p> <p>A. Beginning with hypotheses based on observations..</p> <p>B. Observing and recording some aspects of L2 acquisition.</p> <p>C. Ending with some assumptions and research questions.</p> <p>D. Synthesize different results into the harmonious contents.</p>
<p>39. Which is the first step of the procedures for conducting qualitative research?</p> <p>A. Define the phenomenon to be described.</p> <p>B. Use observations, tapes, questionnaires or interviews.</p> <p>C. Look for patterns in data.</p> <p>D. Recycle through the process of data.</p>
<p>40. What is the limitation of qualitative research in L2 acquisition?</p> <p>A. It can not be conducted together with the quantitative research.</p> <p>B. It can help make up some new theories.</p> <p>C. It is appropriate for describing the social context.</p> <p>D. It is only to describe observable L2 acquisition behavior.</p>
<p>41. Determining the data of the L2 research includes the following, except</p> <p>A. the precise and clear definition of research variables.</p> <p>B. the procedures of the quality assessment and statistical techniques.</p> <p>C. operationalizing the variables by identifying a set of behaviors.</p> <p>D. the assessment of the behaviors occur in the forms of research tools.</p>
<p>42. What is <u>the first point</u> the researcher decides for collecting data??</p> <p>A. What data to collect</p> <p>B. How to collect the data</p> <p>C. The data collection procedures</p> <p>D. The methods of constructing the</p>
<p>43. Which procedure of data collection is the <u>highest degree</u> of explicitness?</p> <p>A. Observations</p> <p>B. Interviews</p> <p>C. Questionnaires</p> <p>D. Tests</p>

<p>44. Which of these procedures are <u>the most suitable</u> for qualitative data?</p> <p>A. Observations, interviews, and questionnaires</p> <p>B. Questionnaires, observations, and tests</p> <p>C. Diaries, interviews, and observations</p> <p>D. Interviews, questionnaires, tests</p>
<p><u>No. 46-48: Select one of the research tools which suits to what to measure.</u></p> <p>A. Tests</p> <p>C. Observations</p> <p>D. Interviews</p> <p>E. Questionnaires</p>
<p>46. It is used to measure language knowledge or ability.</p> <p>47. It is used for collecting a number of the subjects' behaviors.</p> <p>48. It aims to study in-depth information-gathering and free responses.</p>
<p>49. To measure L2 ability and competence, which tool is the most effective?</p> <p>A. Judgment test</p> <p>B. Multiple choice</p> <p>C. Completion</p> <p>D. The oral interview</p>
<p>50. The quality of the data and the data collection is considered in terms of</p> <p>A. The data collection methods</p> <p>B. The procedures of the data collection</p> <p>C. The statistical techniques</p> <p>D. The reliability and validity</p>
<p>51. What does the data analysis technique not mainly depend on?</p> <p>A. The research problem</p> <p>B. The research design</p> <p>C. The statistical techniques</p> <p>D. The data collected</p>
<p>52. Which <u>is the issue</u> the data analysis for <u>the qualitative</u> research?</p> <p>A. Only the form of different interview techniques.</p> <p>B. The form of words in oral or written modes.</p> <p>C. The deductive procedure.</p>

D. Different statistical techniques.
53. What aspect does analyzing descriptive research data refer to? A. Analyzing with the qualitative techniques. B. Analyzing how often certain language phenomenon occurs. C. Analyzing the relationship among different variables. D. Analyzing with the aid of descriptive statistics.
54. Which <u>statistical technique</u> is not frequently used in L2 descriptive data? A. The t-test B. Frequencies C. Central tendencies D. Correlations
55. What <u>is the purpose</u> of the central tendency measures? A. To provide language proficiency from the test of the subjects. B. To indicate how often a phenomenon occurs by the subjects. C. To provide the average and the typical behaviors of the subjects. D. To report and discuss relevant and contrasting research results.
56. What is the main purpose of the t-test? A. To compare the frequency of data between two groups. B. To show the information from the experimental group. C. To provide information on the spread of the subjects' behaviors D. To compare the subjects' means between two groups.
57. What <u>is the main objective</u> of the Chi-square (X^2)? A. To provide information on the spread of the subjects' behaviors B. To compare the frequencies of data between groups. C. To provide information on the spread of the subjects' competencies. D. To compare the subjects' means between two groups.
58. To find out the errors of students' writing, which statistical technique should be used to compare their groups? A. The Chi-square B. The t-test C. The variability

D. The central tendency
59. Which step comes <u>first</u> in the last phase classroom research? A. Reporting the results B. Summarizing the results C. Interpreting the results D. Making recommendation
60. What is usually illustrated in the quantitative classroom research? A. Verbal report B. Tables and graphs C. Charts and frequencies D. Statistical results
61. In which way is the qualitative classroom research usually reported? A. When categorizing the data, the process will be explained. B. When processing the data, the categories will be indicated. C. When analyzing the data, the frequencies of data will be listed. D. When analyzing the data, the statistical data will be shown.
62. Which one of these aspects <u>is not included</u> in interpreting the results? A. Conclusions B. Implications C. Discussions D. Recommendations
63. Reporting classroom research includes the following aspects except
A. The journal articles B. The research report C. The conference papers D. Dissertations or theses
64. What part contains the sources and references of the research report? A. Introduction and description of the problem or topic B. The literature review

C. The bibliography

D. The appendices

65. Which research cycle is not included for an on-going and continuous process in the classroom research in L2 acquisition ?

A. Replication

B. Implementation

C. Meta-analysis

D. Secondary analysis

Pre- and post-tests after Training

Title: “Language Classroom Research for In-service English

Directions: 1. This test aims to evaluate the learners’ knowledge before self-development

or training on language classroom research.

2. This test consists of four multiple-choices of 60 items.

3. Mark an X of the correct answer on the answer sheet.

<p>1. Which is <u>the best definition</u> of language classroom research?</p> <p>A. The research a teacher conducted to prove classroom achievements and theories on language learning and teaching.</p> <p>B. The research a teacher conducted to prove new classroom theories and language teaching.</p> <p>C. The research a teacher conducted for teacher’s academic professional of language learning and teaching.</p> <p>D. The research a teacher conducted for problem solving and implementing achievements in language classrooms.</p>
<p>2. What is the <u>main objective</u> of language classroom research?</p> <p>A. It is to prove classroom language achievements and theories.</p> <p>B. It is to prove new classroom theories and language teaching.</p> <p>C. It is for problem solving and implementing classroom language achievements.</p> <p>D. It if for teacher’s academic professional of language learning and teaching.</p>
<p>3. Which <u>is not the definite scope</u> of language classroom research?</p> <p>A. The development of interlanguage in classrooms.</p> <p>B. The development of language teacher professional.</p> <p>C. The language classroom communication and interaction.</p> <p>D. The language learning strategies and classroom evaluation.</p>
<p>4. Which one is <u>the most suitable benefit</u> of language classroom research?</p> <p>A. The data for language curriculum development.</p> <p>B. The instrument for language teacher professional development.</p> <p>C. The development of language learning and teaching.</p> <p>D. The advancement of language and educational research.</p>
<p>5. Which statement <u>is not one of the characteristics</u> of language classroom research?</p> <p>A. It is a learner-centered research approach.</p> <p>B. It is a teacher-directed research approach.</p> <p>C. It is a collaborative research approach.</p> <p>D. It is an innovative research approach.</p>
<p>6. Which process is to <u>find out a means</u> for the inquiry of language classroom research?</p> <p>A. Beginning process</p> <p>B. Developing the questions.</p> <p>C. Data collecting process</p> <p>D. Analyzing data process</p>
<p>7. Which is <u>not one of the limitation</u> of language classroom research?</p>

<p>A. It cannot promote teacher professional.</p> <p>B. It cannot be inferred for the population.</p> <p>C. Teachers lack of time and expertise.</p> <p>D. It is a context-dependent inquiry.</p>
<p>8. The following choices are major issues in language classroom research, except</p> <p>A. teacher's instruction and behavior.</p> <p>B. learner's behavior.</p> <p>C. teacher's curriculum and instruction.</p> <p>D. classroom interaction</p>
<p>9. Which is <u>not one of the issues</u> of evaluating the problem of language classroom research?</p> <p>A. Learner language learning achievement</p> <p>B. Learner language development features.</p> <p>C. Learner language interaction</p> <p>D. Learner tasks and strategies</p>
<p>10. Which stage should be <u>considered before</u> the stage of considering issues the problems concern?</p> <p>A. The stage of "What are the problems?"</p> <p>B. The stage of selecting problem issues.</p> <p>C. The stage of developing research questions.</p> <p>D. The stage of analyzing the research problems.</p>
<p>11. Which situation is an output analysis of a systematic approach?</p> <p>A. A teacher of English used inappropriate summative test.</p> <p>B. A teacher of English does not usually use the teaching materials.</p> <p>C. Most of M.2 Students ignored practices and doing class assignments.</p> <p>D. M.2 Students got lower achievement scores than the 60% criterion.</p>
<p>Direction: The following situation is for the questions No. 12-14: -.</p> <p><i>"Does an error analysis of a teacher correction by assigning tasks improve M.3 Student's writing skill?"</i></p>
<p>12. For the sentence in the quotation, what <u>do we call</u> in the classroom research?</p> <p>A. A research problem analysis</p> <p>B. A research question</p> <p>C. A research hypothesis</p> <p>D. A systematic approach</p>
<p>13. What is the <u>independent variable</u> of classroom research?</p> <p>A. An error analysis of a teacher correction</p> <p>B. A teacher correction by assigning tasks</p> <p>C. An error analysis of a teacher correction by assigning tasks</p> <p>D. M. 3 Students' writing skill</p>
<p>14. What is the <u>dependent variable</u> of classroom research?</p> <p>A. M. 3 Students' writing skill</p> <p>B. An error analysis of a teacher correction</p> <p>C. An error analysis of a teacher correction by assigning tasks</p> <p>D. A teacher correction by assigning tasks.</p>
<p>15. What is not true about research hypothesis?</p>

<p>A. It is a tentative answer to a research problem. B. It is the relation between the independent and dependent variables. C. It is strictly designed in an experimental research. D. The researcher has to design it in every type of research.</p>
<p>16. When should the related literature be studied in different stages? A. Before the research problems or questions. B. After the research problems or questions. C. Before setting the research objectives. D. After limiting the research methods.</p>
<p>17. Which <u>is not a criterion</u> of selecting the related literature? A. The author not having any experiences. B. The abreast of the times for the research conducted. C. Correct, clear, and sufficient pictures, tables, graphs or maps. D. Easy, reasonable, unbiased language use, and sufficient references.</p>
<p>18. Which <u>is not a principle</u> of writing the report for related literature? A. Integrate different related literature into harmonious contents. B. Outline the related literature in different topics. C. Report and discuss only relevant research results. D. Report and discuss relevant and contrasting research results.</p>
<p>19. Which <u>is true</u> according to writing the report for related literature? A. Report from the previous research abstracts. B. Report from the year of printing in each paragraph of contents. C. Select only the relevant report for the research objectives. D. Synthesize different results into the harmonious contents.</p>
<p>20. Which <u>is not the objective</u> of review of related literature? A. To find out the research title. B. To find out the suggestion for the research implication. C. To find out the research methods. D. To find out the research hypothesis.</p>
<p>21. What are <u>the components</u> of the research citation? A. Author / year of printing / and page No. B. Author / year of printing / and publisher. C. Author / publisher / and page No. D. Author / publisher / and place of printing.</p>
<p>22. Which statement <u>is not</u> the definition of innovation in ELT?? A. Proposals for qualitative change in pedagogical materials. B. Proposals for qualitative change in pedagogical approaches. C. Proposals for qualitative change in pedagogical values. D. Proposals for qualitative approaches or values of individuals.</p>
<p>23. The following are the principal attributes of the ELT innovation <u>except</u>..... A. Teacher's initial dissatisfaction. B. Printed and non-printed materials. C. Feasibility for teacher's work. D. Acceptability for teacher's teaching style.</p>
<p>24. What is <u>the innovation</u> based on instruction and teacher talk?</p>

<p>A. Authentic and created materials. B. The innovation depended on learning styles. C. The innovation based on learners' motivation. D. Self-access learning through teacher's support.</p>
<p>25. Which of the following is <u>the teaching and learning process innovation</u>?</p> <p>A. Printed and non-printed materials. B. Authentic and created materials. C. The cooperative learning model. D. Content-based instruction and curriculum.</p>
<p>26. What <u>is the first step</u> of the innovation development?</p> <p>A. Framing the learning process. B. Developing learning objectives. C. Developing innovative models. D. Trialing the innovative models.</p>
<p>27. What <u>is the most important step</u> before the innovations are used?</p> <p>A. Framing the learning process. B. Developing innovative models. C. Trialing the innovative models. D. Assessing the efficiency of innovation.</p>
<p>28. What aspect <u>can be derived</u> from framing the efficiency criterion?</p> <p>A. Continual behavior and final behavior. B. Continual behavior and process behavior. C. Process behavior and learning behavior. D. Behavior before learning and process behavior.</p>
<p>29. Which <u>is not an innovation</u> development for classroom experiment?</p> <p>A. A construction of a supplementary book for reading short stories. B. Improving reading skills by a short folk tale. C. The study of M.2 Students' English learning styles. D. Improving writing skills by using an error analysis of peer correction.</p>
<p>30. What is <u>the main purpose</u> of the research designs?</p> <p>A. It is easy to collect research data. B. It is to control dependent and independent variables. C. For organizing and planning the experimental instruments. D. To reveal the exact results and control some variables.</p>
<p>31. Which is <u>not one of the components</u> of experimental research?</p> <p>A. The type and number of groups B. Heuristic or hypothesis-generating C. The treatment D. Measurement or observation</p>
<p>32. Which <u>experimental design</u> is usually conducted in classroom research?</p> <p>A. X O B. O1, O2, O3, On...X, On + 1, On + 2 C. O1 X O2 D. Group 1: O1 X O2 Group 2: O3 X O4 Group 3: O5 X O6</p>
<p>33. What is the purpose of <u>qualitative research</u> in L2 classrooms?</p>

<p>A. To study and interpret phenomena in natural contexts. B. To study and make up some theories. C. To study the effect of independent variables. D. To study the theories of dependent and independent variables.</p>
<p>34. Which is <u>not true</u> about major characteristics of qualitative research?? A. Do in natural settings. B. Researcher as a key instrument of data collection. C. Data analyzed by statistical techniques. D. Data collected as words or pictures.</p>
<p>35. Which is <u>true</u> about <u>heuristic</u> or hypothesis-generating research? A. Beginning with hypotheses based on observations.. B. Observing and recording some aspects of L2 acquisition. C. Ending with some assumptions and research questions. D. Synthesize different results into the harmonious contents.</p>
<p>36. Which is <u>the first step of the procedures</u> for conducting qualitative research? A. Define the phenomenon to be described. B. Use observations, tapes, questionnaires or interviews. C. Look for patterns in data. D. Recycle through the process of data.</p>
<p>37. What is <u>the limitation</u> of qualitative research in L2 acquisition? A. It can not be conducted together with the quantitative research. B. It can help make up some new theories. C. It is appropriate for describing the social context. D. It is only to describe observable L2 acquisition behavior.</p>
<p>38. Determining the data of the L2 research includes the following, <u>except</u></p> <p>A. the precise and clear definition of research variables. B. the procedures of the quality assessment and statistical techniques. C. operationalizing the variables by identifying a set of behaviors. D. the assessment of the behaviors occur in the forms of research tools.</p>
<p>39. What is <u>the first point</u> the researcher decides for collecting data?? A. What data to collect B. How to collect the data C. The data collection procedures D. The methods of constructing the instruments</p>
<p>40. Which procedure of data collection is the <u>highest degree</u> of explicitness? A. Observations B. Interviews C. Questionnaires D. Tests</p>
<p>41. Which of these procedures are <u>the most suitable</u> for qualitative data? A. Observations, interviews, and questionnaires B. Questionnaires, observations, and tests C. Diaries, interviews, and observations D. Interviews, questionnaires, and tests</p>

No. 42-44: *Select one of the research tools which suits to what to measure.*

<ul style="list-style-type: none"> A. Tests B. Observations C. Interviews D. Questionnaires
<p>42. It is used to measure language knowledge or ability.</p> <p>43. It is used for collecting a number of the subjects' behaviors.</p> <p>44. It aims to study in-depth information-gathering and free responses.</p>
<p>45. To measure L2 ability and competence, which tool is the most effective?</p> <ul style="list-style-type: none"> A. Judgment test B. Multiple choice C. Completion D. The oral interview
<p>46. The quality of the data and the data collection is considered in terms of</p> <ul style="list-style-type: none"> A. The data collection methods B. The procedures of the data collection C. The statistical techniques D. The reliability and validity
<p>47. What does the data analysis technique <u>not mainly depend on</u>?</p> <ul style="list-style-type: none"> A. The research problem B. The research design C. The statistical techniques D. The data collected
<p>48. Which <u>is the issue</u> the data analysis for <u>the qualitative</u> research?</p> <ul style="list-style-type: none"> A. Only the form of different interview techniques. B. The form of words in oral or written modes. C. The deductive procedure. D. Different statistical techniques.
<p>49. <u>What aspect</u> does analyzing descriptive research data <u>refer to</u>?</p> <ul style="list-style-type: none"> A. Analyzing with the qualitative techniques. B. Analyzing how often certain language phenomenon occurs. C. Analyzing the relationship among different variables. D. Analyzing with the aid of descriptive statistics.
<p>50. Which <u>statistical technique</u> is <u>not</u> frequently used in L2 descriptive data?</p> <ul style="list-style-type: none"> A. The t-test B. Frequencies C. Central tendencies D. Correlations
<p>51. What <u>is the purpose</u> of the central tendency measures?</p> <ul style="list-style-type: none"> A. To provide language proficiency from the test of the subjects. B. To indicate how often a phenomenon occurs by the subjects. C. To provide the average and the typical behaviors of the subjects. D. To report and discuss relevant and contrasting research results.
<p>52. What is the <u>main purpose</u> of the t-test?</p> <ul style="list-style-type: none"> A. To compare the frequency of data between two groups. B. To show the information from the experimental group. C. To provide information on the spread of the subjects' behaviors D. To compare the subjects' means between two groups.
<p>53. What <u>is the main objective</u> of the <u>Chi-square</u> (X^2)?</p>

<p>A. To provide information on the spread of the subjects' behaviors</p> <p>B. To compare the frequencies of data between groups.</p> <p>C. To provide information on the spread of the subjects' competencies.</p> <p>D. To compare the subjects' means between two groups.</p>
<p>54. <u>To find out the errors of students' writing</u>, which statistical technique should be used to compare their groups?</p> <p>A. The Chi-square</p> <p>B. The t-test</p> <p>C. The variability</p> <p>D. The central tendency</p>
<p>55. Which <u>step comes first</u> in the last phase classroom research?</p> <p>A. Reporting the results</p> <p>B. Summarizing the results</p> <p>C. Interpreting the results</p> <p>D. Making recommendation</p>
<p>56. What is usually illustrated in the <u>quantitative classroom research</u>?</p> <p>A. Verbal report</p> <p>B. Tables and graphs</p> <p>C. Charts and frequencies</p> <p>D. Statistical results</p>
<p>57. In which way is the <u>qualitative classroom research</u> usually reported?</p> <p>A. When categorizing the data, the process will be explained.</p> <p>B. When processing the data, the categories will be indicated.</p> <p>C. When analyzing the data, the frequencies of data will be listed.</p> <p>D. When analyzing the data, the statistical data will be shown.</p>
<p>58. Which one of these aspects <u>is not included</u> in interpreting the results?</p> <p>A. Conclusions</p> <p>B. Implications</p> <p>C. discussions</p> <p>D. Recommendations</p>
<p>59. Reporting classroom research includes the following aspects <u>except</u></p> <p>A. The journal articles</p> <p>B. The research report</p> <p>C. The conference papers</p> <p>D. Dissertations or theses</p>
<p>60. What part contains <u>the sources and references</u> of the research report?</p> <p>A. Introduction and description of the problem or topic</p> <p>B. The literature review</p> <p>C. The bibliography</p> <p>D. The appendices</p>

Answer Sheet of Post-test “Language Classroom Research

ชื่อผู้สอบ:โรงเรียน:.....อำเภอ

.....

Direction: Mark an X in the space of each choice for the correct answer.

No	A	B	C	D	No	A	B	C	D	No	A	B	C	D
1					21					41				
2					22					42				
3					23					43				
4					24					44				
5					25					45				
6					26					46				
7					27					47				
8					28					48				
9					29					49				
10					30					50				
11					31					51				
12					32					52				
13					33					53				
14					34					54				
15					35					55				
16					36					56				
17					37					57				
18					38					58				
19					39					59				
20					40					60				

Post-test after Training

Title: "Language Classroom Research for In-service English

Directions: 1. This test aims to evaluate the learners' knowledge before self-development

or training on language classroom research.

2. This test consists of four multiple-choices of 60 items.

3. Mark an X of the correct answer on the answer sheet.

1. Which is <u>the best definition</u> of language classroom research? A. The research a teacher conducted for teacher's academic professional of language learning and teaching. B. The research a teacher conducted for problem solving and implementing achievements in language classrooms. C. The research a teacher conducted to prove classroom achievements and theories on language learning and teaching. D. The research a teacher conducted to prove new classroom theories and language teaching.
2. What is the <u>main objective</u> of language classroom research? A. It is for problem solving and implementing classroom language achievements. B. It is to prove classroom language achievements and theories. C. It is for teacher's academic professional of language learning and teaching. D. It is to prove new classroom theories and language teaching.
3. Which is <u>not the definite scope</u> of language classroom research? A. The development of language teacher professional. B. The language learning strategies and classroom evaluation C. The language classroom communication and interaction. D. The development of interlanguage in classrooms.
4. Which one is <u>the most suitable benefit</u> of language classroom research? A. The instrument for language teacher professional development. B. The data for language curriculum development. C. The advancement of language and educational research. D. The development of language learning and teaching.
5. Which statement is <u>not one of the characteristics</u> of language classroom research? A. It is a collaborative research approach. B. It is a teacher-directed research approach. C. It is a learner-centered research approach. D. It is an innovative research approach.
6. Which process is to <u>find out a means</u> for the inquiry of language classroom research? A. Data collecting process B. Analyzing data process C. Developing the questions.

D. Beginning process
7. Which is <u>not one of the limitation</u> of language classroom research? A. It cannot be inferred for the population. B. It cannot promote teacher professional. C. It is a context-dependent inquiry. D. Teachers lack of time and expertise.
8. The following choices are major issues in language classroom research, except A. teacher's curriculum and instruction. B. teacher's instruction and behavior. C. learner's behavior. D. classroom interaction
9. Which is <u>not one of the issues</u> of evaluating the problem of language classroom research? A. Learner language interaction. B. Learner language learning achievement. C. Learner language development features. D. Learner tasks and strategies
10. Which stage should be <u>considered before</u> the stage of considering issues the problems concern? A. The stage of developing research questions. B. The stage of analyzing the research problems. C. The stage of "What are the problems?" D. The stage of selecting problem issues.
11. Which situation is an output analysis of a systematic approach? A. A teacher of English does not usually use the teaching materials. B. Most of M.2 Students ignored practices and doing class assignments. C. A teacher of English used inappropriate summative test. D. M.2 Students got lower achievement scores than the 60% criterion.
Direction: The following situation is for the questions No. 12-14: -. <i>"Does an error analysis of a teacher correction by assigning tasks improve M.3 Student's writing skill?"</i>
12. For the sentence in the quotation, what <u>do we call</u> in the classroom research? A. A research problem analysis B. A systematic approach C. A research question D. A research hypothesis
13. What is the <u>independent variable</u> of classroom research? A. An error analysis of a teacher correction by assigning tasks B. M. 3 Students' writing skill C. An error analysis of a teacher correction D. A teacher correction by assigning tasks.
14. What is the <u>dependent variable</u> of classroom research? A. An error analysis of a teacher correction B. M. 3 Students' writing skill C. A teacher correction by assigning tasks. D. An error analysis of a teacher correction by assigning tasks
15. What is not true about research hypothesis?

<p>A. It is a tentative answer to a research problem. B. It is the relation between the independent and dependent variables. C. It is strictly designed in an experimental research. D. The researcher has to design it in every type of research.</p>
<p>16. When should the related literature be studied in different stages? A. Before setting the research objectives. B. After the research problems or questions. C. After limiting the research methods. D. Before the research problems or questions.</p>
<p>17. Which <u>is not a criterion</u> of selecting the related literature? A. The abreast of the times for the research conducted. B. The author not having any experiences. C. Correct, clear, and sufficient pictures, tables, graphs or maps. D. Easy, reasonable, unbiased language use, and sufficient references.</p>
<p>18. Which <u>is not a principle</u> of writing the report for related literature? A. Report and discuss only relevant research results. B. Report and discuss relevant and contrasting research results. C. Integrate different related literature into harmonious contents. D. Outline the related literature in different topics.</p>
<p>19. Which <u>is true</u> according to writing the report for related literature? A. Select only the relevant report for the research objectives. B. Synthesize different results into the harmonious contents. C. Report from the previous research abstracts. D. Report from the year of printing in each paragraph of contents.</p>
<p>20. Which <u>is not the objective</u> of review of related literature? A. To find out the research methods. B. To find out the research title. C. To find out the suggestion for the research implication. D. To find out the research hypothesis.</p>
<p>21. What are <u>the components</u> of the research citation? A. Author / year of printing / and page No. B. Author / year of printing / and publisher. C. Author / publisher / and page No. D. Author / publisher / and place of printing.</p>
<p>22. Which statement <u>is not</u> the definition of innovation in ELT? A. Proposals for qualitative change in pedagogical values. B. Proposals for qualitative change in pedagogical materials. C. Proposals for qualitative approaches or values of individuals. D. Proposals for qualitative change in pedagogical approaches.</p>
<p>23. The following are the principal attributes of the ELT innovation <u>except</u> A. Feasibility for teacher's work. B. Acceptability for teacher's teaching style. C. Teacher's initial dissatisfaction. D. Printed and non-printed materials.</p>
<p>24. What is <u>the innovation</u> based on instruction and teacher talk? A. Authentic and created materials. B. Self-access learning through teacher's support. C. The innovation depended on learning styles.</p>

C. The innovation based on learners' motivation.
25. Which of the following is <u>the teaching and learning process innovation</u> ? A. The cooperative learning model. B. Content-based instruction and curriculum. C. Printed and non-printed materials. D. Authentic and created materials.
26. What <u>is the first step</u> of the innovation development? A. Framing the learning process. B. Trialing the innovative models. C. Developing learning objectives. D. Developing innovative models.
27. What <u>is the most important step</u> before the innovations are used? A. Assessing the efficiency of innovation. A. Framing the learning process. C. Developing innovative models. D. Trialing the innovative models.
28. What aspect <u>can be derived</u> from framing the efficiency criterion? A. Continual behavior and final behavior. B. Process behavior and learning behavior. C. Continual behavior and process behavior. D. Behavior before learning and process behavior.
29. Which <u>is not an innovation</u> development for classroom experiment? A. Improving reading skills by a short folk tale. B. The study of M.2 Students' English learning styles. C. A construction of a supplementary book for reading short stories. D. Improving writing skills by using an error analysis of peer correction.
30. What is <u>the main purpose</u> of the research designs? A. For organizing and planning the experimental instruments. B. To reveal the exact results and control some variables. C. It is easy to collect research data. D. It is to control dependent and independent variables.
31. Which is <u>not one of the components</u> of experimental research? A. Heuristic or hypothesis-generating B. Measurement or observation C. The treatment D. The type and number of groups
32. Which <u>experimental design</u> is usually conducted in classroom research? A. O1 X O2 B. X O C. Group 1: O1 X O2 Group 2: O3 X O4 Group 3: O5 X O6 D. O1, O2, O3, On...X, On + 1, On + 2
33. What is the purpose of <u>qualitative research</u> in L2 classrooms? A. To study and make up some theories. B. To study the effect of independent variables. C. To study and interpret phenomena in natural contexts. D. To study the theories of dependent and independent variables.
34. Which <u>is not true</u> about major characteristics of qualitative research?

<p>A. Data analyzed by statistical techniques. B. Do in natural settings. C. Researcher as a key instrument of data collection. D. Data collected as words or pictures.</p>
<p>35. Which is <u>true</u> about <u>heuristic</u> or hypothesis-generating research? A. Ending with some assumptions and research questions. B. Synthesize different results into the harmonious contents. C. Beginning with hypotheses based on observations. D. Observing and recording some aspects of L2 acquisition.</p>
<p>36. Which is <u>the first step of the procedures</u> for conducting qualitative research? A. Look for patterns in data. B. Recycle through the process of data. C. Define the phenomenon to be described. D. Use observations, tapes, questionnaires or interviews.</p>
<p>37. What is <u>the limitation</u> of qualitative research in L2 acquisition? A. It can help make up some new theories. B. It is appropriate for describing the social context. C. It can not be conducted together with the quantitative research. D. It is only to describe observable L2 acquisition behavior.</p>
<p>38. Determining the data of the L2 research includes the following, <u>except</u>..... A. operationalizing the variables by identifying a set of behaviors. B. the assessment of the behaviors occur in the forms of research tools. C. the precise and clear definition of research variables. D. the <u>procedures of the quality assessment and statistical techniques</u>.</p>
<p>39. What is <u>the first point</u> the researcher decides for collecting data? A. The data collection procedures B. The methods of constructing the instruments. C. What data to collect D. How to collect the data</p>
<p>40. Which procedure of data collection is the <u>highest degree</u> of explicitness? A. Questionnaires B. Tests C. Observations D. Interviews</p>
<p>41. Which of these procedures are <u>the most suitable</u> for qualitative data? A. Questionnaires, observations, and tests B. Diaries, interviews, and observations C. Observations, interviews, and questionnaires D. Interviews, questionnaires, and tests</p>
<p><u>No. 42-44: Select one of the research tools which suits to what to measure.</u> A. Tests B. Questionnaires C. Interviews D. Observations</p>
<p>42. It is used to measure language knowledge or ability.</p>
<p>43. It is used for collecting a number of the subjects' behaviors.</p>
<p>44. It aims to study in-depth information-gathering and free responses.</p>
<p>45. To measure L2 ability and competence, which tool is the most effective?</p>

<p>A. Completion B. Judgment test C. The oral interview D. Multiple choice</p>
<p>46. The quality of the data and the data collection is considered in terms of A. The procedures of the data collection B. The data collection methods C. The statistical techniques D. The reliability and validity</p>
<p>47. What does the data analysis technique <u>not</u> mainly depend on? A. The statistical techniques B. The data collected C. The research problem D. The research design</p>
<p>48. Which <u>is the issue</u> the data analysis for <u>the qualitative</u> research? A. The deductive procedure. B. Different statistical techniques. C. Only the form of different interview techniques. D. The form of words in oral or written modes.</p>
<p>49. <u>What aspect</u> does analyzing descriptive research data <u>refer to</u>? A. Analyzing the relationship among different variables. B. Analyzing with the aid of descriptive statistics. C. Analyzing with the qualitative techniques. D. Analyzing how often certain language phenomenon occurs.</p>
<p>50. Which <u>statistical technique is not</u> frequently used in L2 descriptive data? A. Central tendencies B. Correlations C. Frequencies D. The t-test</p>
<p>51. What <u>is the purpose</u> of the central tendency measures? A. To provide language proficiency from the test of the subjects. B. To report and discuss relevant and contrasting research results. C. To indicate how often a phenomenon occurs by the subjects. D. To provide the average and the typical behaviors of the subjects.</p>
<p>52. What is the <u>main purpose</u> of the t-test? A. To show the information from the experimental group. B. To compare the frequency of data between two groups. C. To provide information on the spread of the subjects' behaviors D. To compare the subjects' means between two groups.</p>
<p>53. What is <u>the main objective</u> of the <u>Chi-square</u> (X^2)? A. To provide information on the spread of the subjects' competencies. B. To compare the subjects' means between two groups. C. To provide information on the spread of the subjects' behaviors D. To compare the frequencies of data between groups.</p>
<p>54. <u>To find out the errors of students' writing</u>, which statistical technique should be used to compare their groups? A. The t-test B. The variability C. The Chi-square D. The central tendency</p>

55. Which <u>step comes first</u> in the last phase classroom research? A. Interpreting the results B. Making recommendation C. Reporting the results D. Summarizing the results
56. What is usually illustrated <u>in the quantitative classroom research</u> ? A. Statistical results B. Charts and frequencies C. Tables and graphs D. Verbal report
57. In which way is the <u>qualitative classroom research</u> usually reported? A. When analyzing the data, the frequencies of data will be listed. B. When analyzing the data, the statistical data will be shown. C. When categorizing the data, the process will be explained. D. When processing the data, the categories will be indicated.
58. Which one of these aspects <u>is not included</u> in interpreting the results? A. Implications B. Discussions C. Conclusions D. Recommendations
59. Reporting classroom research includes the following aspects <u>except</u>
A. The research report B. Dissertations or theses C. The conference papers D. The journal articles
60. What part contains <u>the sources and references</u> of the research report? A. The bibliography B. The appendices C. Introduction and description of the problem or topic D. The literature review

Structure of the ELCR Model: Module 1 Identifying Background Knowledge of English Language Classroom Research

Contents

- 1) Definition of English language classroom research
- 2) Scope of English language classroom research
- 3) Value of English language classroom research
- 4) Characteristics of English language classroom research
- 5) Process of English language classroom research
- 6) Limitation of English language classroom research

Background concepts

1) English language classroom research (LCR) is research that is carried out in the language classroom for the purpose of answering important questions about the learning and teaching of a foreign language.

2) English language classroom research can be categorized as the development of interlanguage, communication, interaction, strategies, learning styles, and classroom evaluation.

3) English language classroom research supports second language learning and teaching in English language classroom settings. Also, it can promote teachers' professional development.

4) The characteristics of LCR focus on a classroom as foreign language learning and teaching environments. It also promotes language skills and academic achievements.

5) The process of LCR includes 6 stages: 1) beginning with teacher's needs 2) developing the questions, 3) data collecting, 4) analyzing data, 5) reflecting on the findings, and 6) sharing the findings.

6) The limitation of LCR includes the way the world outside the classroom bracketed of learning, teachers' time limits, and a variety of research modes of language learning and teaching.

Objectives

After studying the content in Module 1, trainees are able to:

- 1) define the terms of English language classroom research,
- 2) identify the scope of English language classroom research,
- 3) indicate the values of English language classroom research,
- 4) explain the characteristics English language classroom research,

- 5) identify the process of English language classroom research, and
- 6) present the limitation of English language classroom research.

Training activities

- 1) **Pre-training stage;** trainees
 - 1.1) do pre-test on the background knowledge of LCR
 - 1.2) check survey of trainees' opinions on the lesson learned
- 2) **Developmental stage;** trainees
 - 2.1) learn through the handouts of LCR content
 - 2.2) discuss about what trainees have learned among trainee groups and the trainer
- 3) **Application;** trainees
 - 3.1) self-evaluate the content of the LCR background knowledge
 - 3.2) revise the content of LCR background knowledge

Evaluation

- 1) Trainees do the post-test and feedback
- 2) If trainees do the test incorrectly in any items, they have to return for revising the content.

1

Background knowledge of English Language Classroom Research

1.1 Definition of English language classroom research

In English language teaching settings, linguists have similarly defined

English language classroom research as the following points of views:

Kochis (online: 2003) tentatively defines classroom research that it is more than just teaching techniques and tricks. Its basic idea might be best described as "the systematic investigation of the effects of our teaching on student learning for the purpose of improving instruction. It consists of two aspects: a repertoire of techniques for getting information from students about their learning and an effort to organize that information into a larger picture of practical learning theory.

Nunan (1990) defines that the LCR is research that is carried out in the language classroom for the purpose of answering important questions about the learning and teaching of foreign languages. This kind of research derives its data from either genuine foreign language classrooms or in experimental laboratory settings that are set up for the purpose of research.

Finally, Cross and Steadman (1996) define the LCR as ongoing and cumulative intellectual inquiry by FL classroom teachers into the nature of teaching and learning in their own classrooms. At its best, classroom research should benefit both teachers and students by actively engaging them in collaborative study of learning as it takes place day by day in the particular context of their own classrooms.

From the previous discussion, it can be concluded that classroom research concerns with the inputs in the classroom settings - teacher and learner interaction, syllabus and materials. The outputs - classroom achievements resulted from the classroom are also concerned. In terms of L2 classroom research, it centers on a classroom as language learning and teaching environments. It also promotes language skills and academic achievement.

1.2 Scope of English language classroom research

Lier (1988: 9-16) suggests the context of L2 classroom research that:

1) the central data derive from things that go on in the classroom. The teacher as researcher spends most of the time during the data-gathering phase(s) of the project inside actual, regular, ongoing classrooms that have not been specially set up for the purpose of research, and

2) In a classroom, actions occur in a context. What is said and done is influenced by what happened before, and influences what happens next. Some instances of classroom interaction occur because they have been planned to occur that way, others because circumstances at the moment demand action and reaction.

According to the former view, the scope of classroom research, in the theme of language learning and teaching, focuses on the following aspects:

1.2.1.) *The nature and development of interlanguage*

In the L2 classroom, learners use a language, which is somewhere along a continuum between their native language and the target language. The L2 classroom is also a place where language is explicitly modeling so that learners can take advantage of it as input. Learners do many things, which demonstrate the process of hypothesis formation and testing of linguistic fuel for the extension of the learners' interlanguage.

1.2.2) *The role of communication and interaction*

The classroom provides different motives for communicating and participating in the outside social world. The information-exchange activities we find in the applications of the communicative approach tend to transform classroom communication, so the potential of the L2 classroom itself offers the authentic resources for interaction.

1.2.3) *The use of strategies*

When we communicate, we interact with another or others. The effect of our communication depends on strategies. These strategies involve, among many other things, manipulating the code systems of a language in specific ways and dealing with communicative problems. Bialystok (1983b;105) proposes as follows:

- a) L1-based strategies are composed of a) language switch, b) foreignizing, and c) transliteration.
- b) L2-based strategies consist of a) semantic contiguity, b) description, and c) word forming.

1.2.4) Variations in *learning*: styles and modes

Language research realizes and concentrates on how different people may have different ways of learning a second language. The realization considerably weakens methodological approaches such as behavioral, cognitive, naturalistic, even communicative ones. Classroom research can reflect on the issue by looking at the ways in which learners in classroom approach tasks and activities, and the ways in which they attempt to solve their communicative problems.

1.2.5) The centrality of *evaluation* includes feedback and knowledge of results. Teachers involved in language teaching and learning will readily agree that evaluation and feedback are central to the process and progress of language learning. To evaluate the classroom activities, the major issues are concerned with:

- 1) classroom activities demanded some form of the learners' knowledge of results,
- 2) learners' contributions by the teacher in the form of praise or correction or by the learners themselves in terms of self-monitoring, judging the effects of talk, or self-correction, and
- 3) learners' capabilities evaluated by means of various tests which can be very important to their future careers.

1.3 Values of English language classroom research

The value of the LCR covers in both the curriculum and professional development and L2 learning and teaching as the following conclusion:

- 1) Language teachers develop themselves professionally or on a continuing basis. They have to access to a wide variety of methods of doing classroom research.
- 2) As teachers, learners, teacher trainers and researchers, it is assumed that language development can and does occur in classrooms. It is necessary particularly for teachers themselves to play a decisive role in the investigation. It is crucial to the profession.
- 3) Classroom research opens up the classroom to a broad range of students' communicating opinions and idea and shifts from a teacher-centered to a student-centered classroom.
- 4) The LCR as a teacher research, it empowers teachers to make a positive difference in terms of classroom practice. Besides, it enables teachers to provide relevant information for more effective ways of implementing teaching and learning in actual classrooms.

1.4 Characteristics of English language classroom research

Characteristics of the English language classroom research as Cross and Steadman's definition (1996) focuses on teachers or on learners, or on the interaction between teachers and learners. It can be concluded as in general classroom research as follows:

- 1) Learner-centered: focuses primary attention of teachers and students on observing and improving language learning, rather than on observing and improving teaching.
- 2) Teacher-directed: dedicated to the proposition that college teachers are quite capable of conducting useful and valid research on classroom learning.
- 3) Collaborative: requires the active engagement of students and teachers. In most circumstances, students become partners in the research and share in the analysis and interpretation of results.
- 4) Context-Specific: [is] conducted to specify questions of an identified classroom, the teaching of a particular discipline to a known group of students.
- 5) Scholarly: intellectual demanding and professionally responsible. It builds upon the knowledge base of research on teaching and learning and requires the identification of a researchable question, the careful planning of an approach research design and consideration of the implications of the research practice.
- 6) Practical and relevant: the questions selected are practical questions that the teacher faces in teaching the class.
- 7) Continual: [is] on going. Frequently, a classroom research project will raise new questions, leading to the classroom investigations.

1.5 Process of English language classroom research

The LCR as the process of teacher research, MacLean and Mohr (1999) outline conducting a teacher research project as the subsequent points:

- 1) Beginning: What do you need? You need a log, a place to record your search of answers. This step is to explore and analyze the problems occurred in your classroom settings, from both learners themselves and teachers' teaching methods or materials.
- 2) Developing the question(s): You need to find out what you need to know. You need a means by which you can generate questions that will be the focus of your inquiry. This step is to state how to solve the problems occurred and improve the classroom elements.
- 3) Data collecting: You need a systematic way of collecting multiple sources of data and the time to reflect upon what you are discovering. The teachers develop the classroom innovations to solve the problems occurred.
- 4) Analyzing data: You need to analyze the data to determine what is important and how your findings relate to your questions and the focus of your

inquiry. This step is for adopting the methods or materials to improve the classroom achievements.

5) Reflecting on the findings: You need to pull your findings, your thoughts and reactions about those findings together in some way. This is usually done in what is called a working draft. Some teacher researchers call it a “reflection paper” or a “deadline draft” of a research report.

6) Sharing the findings: What you discover in the research paper can be shared with your professional colleagues in a number of ways. You can share it with your school staff, submit your paper to publications such as an educational journal or Internet web site, present it at an educational conference, or submit it to be included in an educational book.

The six steps of the LCR process can be summarized in Figure 1.1 as follows:

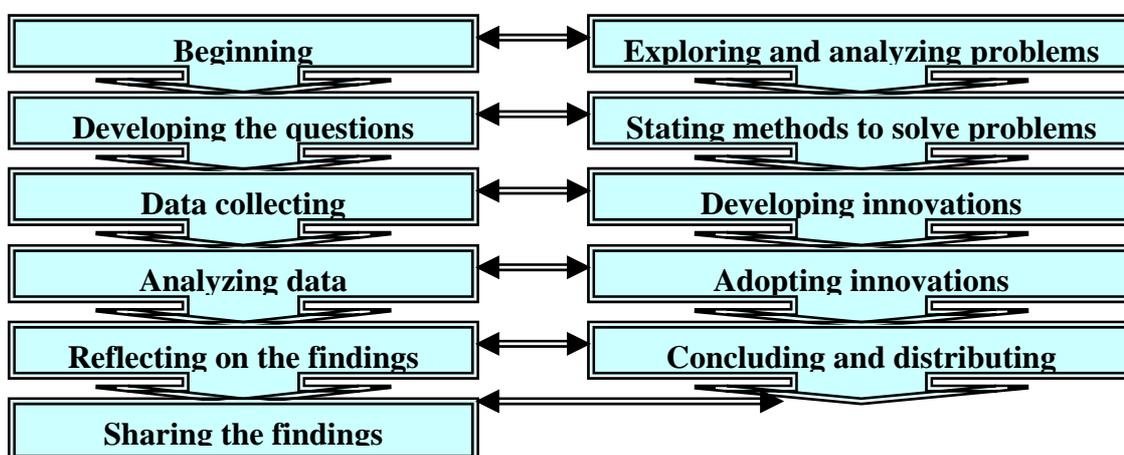


Figure 1.1: Process of English language classroom research

1.6 Limitation of English language classroom research

The limitation of the LCR includes two aspects of its process and school environments as the following points:

1) The obvious limitation of the LCR to educational knowledge is that as soon as you reintroduce the bracketed variables in the real world of the classroom, the “results” of the research no longer hold in any kind of practical, obvious way. Also, the classroom research is basically context-dependent inquiry.

2) The LCR has the limitation in terms of the limited sample subjects in the classroom, so its results cannot be inferred for the population.

In terms of school environments, Nunan (2001, p.202) suggests the limitation of the LCR based on teachers’ subsequent problems:

- 2.1) lack of time,
- 2.2) lack of expertise
- 2.3) lack of on going support
- 2.4) fear of being revealed as an incompetent teacher, and
- 2.5) fear of producing a public account of their research

In brief, the English language classroom research can be teacher research conducted in their classrooms, so as to solve the problems occurred and implement the academic achievements in classrooms. To achieve doing the LCR, teacher researchers begin with the problems found out in their classrooms, develop classroom innovations for solving, and conclude the research results to solve those problems.

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Trainee's Self-evaluation

Directions: After studying the section of the LCR background knowledge, the trainee will self-evaluate about the lessons learned, so question yourself and write in brief to check your understanding. If you are still in doubt, return to the lessons.

- 1) Definition of language classroom research

.....

- 2) Scope of language classroom research

.....

3) Value of language classroom research

.....

4) Characteristics of language classroom research

.....

5) Process of language classroom research

.....

6) Limitation of language classroom research

.....

**Test: Self-evaluation, Module:1 Background of English Language
Classroom Research**

1. Which is the best definition of language classroom research?

- A. The research a teacher conducts to prove classroom achievements and theories on language learning and teaching.
- B. The research a teacher conducts to prove new classroom theories and language teaching.
- C. The research a teacher conducts for teacher's academic professional of language learning and teaching.
- D. The research a teacher conducts for problem solving and implementing achievements in language classrooms.

2. What is the main objective of language classroom research?

- A. It is to prove classroom language achievements and theories.
- B. It is to prove new classroom theories and language teaching.
- C. It is for problem solving and implementing achievements in language classrooms.
- D. It is for teacher's academic professional of language learning and teaching.

3. Which is not the definite scope of language classroom research?

- A. The development of interlanguage in classrooms.
- B. The development of a language teacher professional.
- C. The language classroom communication and interaction..
- D. The language learning strategies and classroom evaluation.

<p>4. Which one is <u>the most suitable benefit of language classroom research</u>?</p> <p>A. The data for language curriculum development. B. The instrument for the language teacher professional development. C. The development of language learning and teaching. D. The advancement of language and educational research.</p>
<p>5. Which statement is <u>not one of the characteristics of language classroom research</u>?</p> <p>A. It is a learner-centered research approach. B. It is a teacher-directed research approach. C. It is a collaborative research approach. D. It is an innovative research approach.</p>
<p>6. Which process is to find out a means for the inquiry of language classroom research?</p> <p>A. The beginning process B. The developing the questions. C. The data collecting process D. The analyzing data process</p>
<p>7. Which is <u>not one of the limitation of language classroom research</u>?</p> <p>A. It cannot promote the teacher professional. B. It cannot be inferred for the population. C. Teachers lack of time and expertise. D. It is a context-dependent inquiry.</p>

**Self-development for Remedial Training Model, Module 1:
Background of English Language Classroom Research**

Directions: *This section aims to show the answers from the post-test for the trainees to check. If you get the incorrect answers, revise the content of the LCR before you study the next module: Follow the suggestion in each item.*

<p>Item 1: <u>The correct answer is D.</u></p> <p>Do you have the correct answer? [] Yes [] No If you have an incorrect one, return to revise Section 1.1, then answer the question again. The definition of the LCR is</p>
<p>Item 2: <u>The correct answer is C.</u></p> <p>Do you have the correct answer? [] Yes [] No If you have an incorrect one, return to revise Section 1.1, then answer the question again. The main objective of the LCR is</p>
<p>Item 3: <u>The correct answer is B.</u></p> <p>Do you have the correct answer? [] Yes [] No If you have an incorrect one, return to revise Section 1.2, then answer the</p>

question again.

The exact scope of the LCR contains

Item 4: The correct answer is C.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 1.3, then answer the question again.

The benefit or the value of the LCR includes

Item 5: The correct answer is D.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 1.4, then answer the question again.

The characteristics of the LCR consist of

Item 6: The correct answer is B.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 1.5, then answer the question again.

The process to find out a means of the LCR is

Item 7: The correct answer is A.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 1.6, then answer the question again.

The limitation of the LCR is composed of

If you have studied and revised your incorrect answers, please continue in the next module.

Structure of the ELCR Model: Module 2 Basic Elements of English Language Classroom Research

Contents

- 1) Major issues in English language classroom research
- 2) Evaluating and developing English language classroom research problems
- 3) Variables in the English language classroom research
- 4) Hypothesis of the English language classroom research

Background Concepts

1) Major issues in English language classroom research comprise of learning from instruction, teacher talk, learner behavior and interaction in the classroom. These issues are studied based on the areas of methodology, classroom management and interaction, applying skills, affective factors, assessment and evaluation, and acquisition.

2) Evaluating and developing problems of the LCR is based on investigative questions of the issues of learner language development features, learner language interaction, tasks and strategies. It is classified into four stages: what are the problems, selecting problem issues, considering what issues the problems concern, and developing classroom research questions.

3) Variables in the English language classroom research are defined as a group of characteristics which may differ from individual to individual or from group to group. They are the independent variable and the dependent variable.

4) Hypotheses is a tentative answer to research problem, expressed in the form of a clearly stated relation between the independent and the dependent variables.

Objectives

After studying the content in Module 2, trainees are able to:

- 1) indicate major issues in English language classroom research,
- 2) illustrate, evaluate and develop English language classroom research problems
- 3) point out the valuables of the English language classroom research,
- 4) indicate how to write up the hypothesis of the classroom research.

Training Activities

- 1) **Pre-training stage;** trainees
 - 1.1) Do the pre-test on elements of LCR.
 - 1.2) Check the survey of trainees' opinions on the lesson learned.
- 2) **Developmental stage;** trainees
 - 2.1) Learn through the handouts of LCR elements.
 - 2.2) Discuss about what trainees have learned among trainee group and the trainer.
- 3) **Application;** trainees
 - 3.1) Self-evaluate the content of the LCR elements.
 - 3.2) Revise the content of LCR elements.

Evaluation

- 1) Trainees do the post-test and feedback.
- 2) If trainees do the test incorrectly, they have to return for revising the content

2

Basic Elements of English Language Classroom Research

2.1 Major issues in English language classroom research

Chaudron (1988:6-11) introduces issues in L2 classroom research as in the following points:

1) *Learning from instruction*

This point indicates the implication of second language acquisition between the theory and teaching and syllabus construction. A learning task from the syllabus will usually involve:

- 1.1) the acquisition of certain fundamental units or elements (e.g. words, facts, rules, concepts);
- 1.2) their integration in functional relationships and application methods; and
- 1.3) a certain amount of production, practice, or other mental operations with those elements.

2) *Teacher talk*

This point refers to L2 teacher speech in usual classroom settings. The area of the research has generally attempted to explore the nature of classroom speech and, specially, to describe and quantify the large number of features of teacher speech. It might be modified as speech rate, syntax, vocabulary, pragmatic functions, and so on

referring to effective input in the classroom with respect to their effects on learner development.

3) *Learner behavior*

This is slightly broader perspective, which focuses not only on students' linguistic behavior but also their learning strategies and social interactions with other learners. The research on L2 acquisition has been done based on the question of what factors (e.g. classroom grouping or tasks) facilitate optimum learning behaviors and the control of students' own learning.

4) *Interaction in the classroom*

This aspect can influence the classroom on L2 development. The interactive features consist of ways of negotiating comprehensibility and meaning. Especially, non-native speakers' interactive speech can result in simplified TL syntax and morphology. These issues take a much greater role to attribute the interaction of classroom behaviors, such as turn taking, questioning and answering, negotiating of meaning, and feedback. Interaction is viewed as significant. It is argued in three points:

4.1) interaction of learners to decompose the TL structures and derive meaning from classroom events,

4.2) interaction of learners' opportunities to incorporate TL structures into their own speech, and

4.3) the meaningfulness for learners of classroom events, whether the thought of as interactive or not the extent to the communication jointly constructed between the teacher and learners.

The areas and issues include a range of issues to be investigated which show the sorts of things which at least one group of teachers think worthy of investigation. Those areas and issues adapted from Nunan's (1989) are shown below in Table 2.1:

Area	Issues
Methodology	-Task analysis and different demands that tasks create -What materials/methods learners do/do not respond to -The learning and teaching of vocabulary.
Classroom management and interaction	-The occurrence of digressions within a lesson by teachers and students and the extent to which these lead to useful learning outcomes or simply distract, confuse or mislead students -The management of classroom interactions -Effective and ineffective instruction given -How to increase student talking time. -Do students think this is valuable? Does it enhance learning?
Professional development and self-evaluation	-How do teachers perceive peer analysis? -In what ways is it helpful, threatening, and inhabiting? -How action research can improve cohesion/sense of progression from the students' perspective -Peer teaching/learning for teachers -Promoting personal responsibility for

 Structure of ELCR Model : Module 2

	professional development -Using classroom analysis with new teachers to assist them develop their own practices more effectively
Applying skills	-Encoding and monitoring students' use of English outside the classroom
Affective factors	-Student' attitudes towards games and drama activities -Students' perceptions of language learning
Assessment and evaluation	-Evaluating the effectiveness of teaching -Methods of post-learning arrangement assessment -How to develop classroom tests for end-of-course assessment
Acquisition	-Whether plateaus in language learning really exist

Table 2.1: Areas and issues nominated by teachers as worth investigating

2.2 Evaluating and developing the problems of the ELCR

Nunan (1989; 36) illustrates the questions of nature of L2 learner development which might be investigated in the classroom as in Table 2.2.

Issues	Sample investigative questions
Learner language development features	-In my teaching, I generally provide an application task to follow up a formal presentation. -Which language items do learners actually use in the application task? -Do learners learn closed class items (e.g. pronouns demonstratives) when these are presented as paradigms, or when they are taught separately over a period of time?
Learner language interaction	-In what ways do turn taking and topic management vary with variations in the size and composition of learner groups? -Are learners more effective at conversational management when techniques such as holding the floor, bringing in another speaker, etc., are consciously taught?
Tasks	-Which tasks stimulate the most interaction? -Which tasks work best with mixed-ability groups?
Strategies	-Is there a conflict between the classroom activities I favor and those learners prefer? -Do my best learners share certain strategy preferences, which distinguish them from less efficient learners?

Table 2.2: Evaluation of research problems in the LCR

From Table 2.2 above, it can be concluded that the research questions on the L2 learner development based on teachers' classroom awareness can be shown in the following stages:

Stage 1: What are the problems?

Teacher researchers explore the problems in the classroom affecting the qualities of learners in terms of cognitive domain, affective domain and psychomotor domain. Besides, teachers should apparently state problems on learners themselves, learning and teaching processes inside and outside classrooms or teachers themselves. The subsequent examples are shown:

A teacher of English found out the problems in her M.1 classroom as follows:

- 1. More than half of students got Fundamental English learning achievement lower than the school criterion.*
- 2. Around 20 students cannot pronounce the words with the sound /th/.*
- 3. Around 10 students do not pay attention on learning activities.*
- 4. Three students do not participate in classroom activities.*

Example 2.1: Problems occurred in Mattayomsuksa 1 classroom

Stage 2: Selecting problem issues

After teachers know the problems occurring in classrooms, they need to rank and select the classroom problems to study and solve. Basic principles and criterions for selecting the problems to study are as follows:

- 1) The problems of every student should be taken consideration.
- 2) The results of the teacher research can benefit the students, classroom and school.
- 3) The problems studied should be based on the teacher's ethic and should not affect anyone concerned.
- 4) The problems can be solved by the data gained in classrooms. A classroom teacher should consider the appropriateness of the research conducted.

An example of selecting the problem to be studied is as follows:

From example 2.1, a teacher chooses the problem No.1 (most M.1 students got low achievement in Fundamental English. It is found that those students' problems should be solve and improve their achievements before the other problems.

Example 2.2: Selecting problems occurred to be studied

Stage 3: Considering issues the problem concerns

After selecting one of the problem issues in stage 2, study which issues the problem concerns. In case the problem is considered to be complex, that problem should be discriminated into each component and the problem as a whole. Usually, the problems of learning and teaching in each component are related to each other.

Therefore, the problem can be analyzed in various ways. Here, the systematic approach is suggested to be the guideline.

The systematic approach of instructional design as Dick, Carey and Carey's (2001), it can be applied that it includes the context, input, process and output procedure. The procedure component is in Figure 2.1.

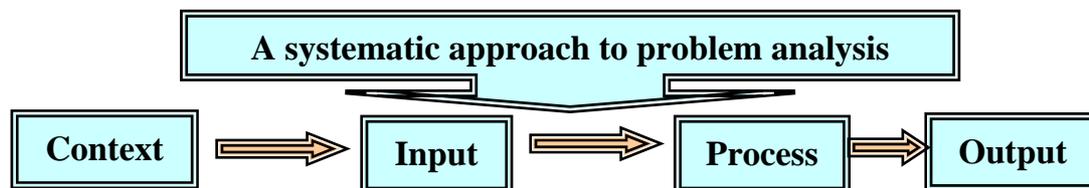


Figure 2.1: Analyzing problems by a systematic approach

The details of each component that is associated with learning and teaching in classrooms are as follows: -

1) Context

The context of learning and teaching which is the base of the curriculum management in schools includes the educational philosophy, curriculum goals, school environments such as, students' guardians' careers, socio-economic status and needs.

2) Input

The input in learning and teaching processes consists of school curriculum, teaching methods, personnel composing of students and teachers, school budget, and materials. The input quality in classrooms affects the effective learning and teaching.

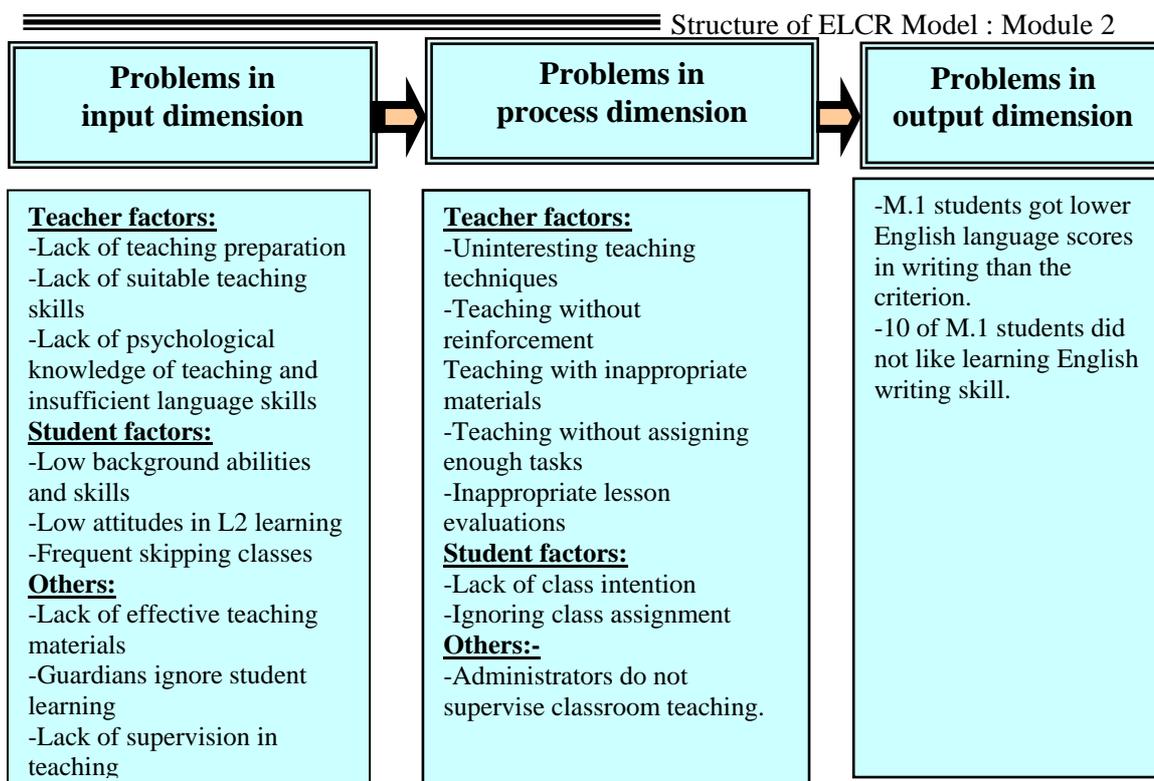
3) Process

This component is composed of a variety of preparative processes of learning and teaching which impacts the student quality in the cognitive domain, affective domain, and psychomotor domain. Therefore, the effective process can affect on the output or the learning competency of students.

4) Output

The output of learning and teaching processes contains the characteristics of students in terms of learning achievement, attitudes and skills. From four components of a systematic approach, Example 2.3 illustrates analyzing the problems occurred in classrooms.

According to stage 2, a teacher chooses the problem of M.1 students that got lower achievement in Fundamental English than the criterion.



Example 2.3: Analyzing the research problem by a systematic approach

Stage 4: Developing classroom research questions

Owing to selecting earlier problem issues, in developing a research problem or question, Wiersma (1986) suggests that the problem be broadly stated in the first instance and then progressively refined and restricted through a review of the literature. He provides the *following examples* of how an initial broad area can be reformulated, either as a problem statement or question.

Original:	Achievement and teaching techniques
Restatement:	A study of the effects of three teaching techniques on fundamental English of M.1 Students
Question:	<i>Do three different teaching techniques have different effects on fundamental English achievement scores of M.1 students in School A?</i>
Original:	Language skill achievement
Restatement:	A teacher correction of an error analysis by assigning writing tasks to improve writing skill of M.1 Students in School B.
Question:	<i>Does an error analysis of teacher correction improve English writing skill of M.1 Students in School B?</i>

Example 2.4: How to formulate a language research question

To clarify the step of developing language research question, one more procedure of formulating a research question is indicated in Example 2.5:

1. Situation: From Example 2.4, after the teacher analyzes the problem by a systematic approach on Fundamental English, the teacher is interested in the study of if using three different teaching techniques have differing effects on Fundamental English achievement scores of M.1 Students.

Research question: *Do three different teaching techniques have differing effects on Fundamental English achievement scores of M.1 Students in A School?*

2. Situation: After the teacher analyzes the problem by a systematic approach on writing skill, she is interested in the study whether a teacher correction of an error analysis by assigning writing tasks improves M.1 Students' writing skill or not.

Research question: *Does a teacher correction of an error analysis by assigning writing tasks improve M.1 Students' writing skill?*

3. Situation: (One more example) A teacher of English finds that M.5 Students got the lowest scores in listening comprehension scores of the other three skills. She studies the problems by a systematic approach and finds out that more listening practices guided by picture clues can improve the students' listening comprehension achievement.

Research question: *Can listening practices guided by picture clues improve listening comprehension achievement of M.5 Students?*

Example 2.5: More examples of formulating a language research question

2.3 Variables in the English language classroom research

Variables in the English language classroom research, Nunan (1992) defines that a variable is a group of characteristics which may differ from individual to individual or from group to group. In case of language teaching, it includes language proficiency, aptitude, motivation, and so on. In language *classrooms*, researchers often want to look at the relationship between two variables as follows:

1) The first, called an independent variable.

This influences or affects a second variable, such as a teaching method, learners' sex, or age. This variable sometimes called a *predictor* variable.

2) The second, called a dependent variable

This is sometimes called a *criterion* variable that can change its values depended on the independent variable, such as test scores on a formal test of language proficiency, or language achievement scores.

Besides those two variables, in experimental research of social sciences, *extraneous variable* which refers to any variables beyond conducting the research may occur and affect the dependent variable. However, this variable type is usually ignored in classroom practices. Example 2.6 indicates considering independent and dependent variables:

1. A researcher is interested in two teaching methods whether **using programmed instruction and article reading can affect reading comprehension ability of M.5 students or not.**

1.1 An independent variable here includes two teaching methods of *using programmed instruction* and *article reading*.

1.2 A dependent variable here refers to *reading comprehension ability*.

2. A researcher found out that some M.2 Students are shy to speak English and they do not pay attention on learning and speaking practice. So, **he decides to study and improve the students' interests of speaking practice by using a speaking model from a television program.**

2.1 An independent variable here refers to *a speaking model from a television program*.

2.2 A dependent variable here refers to *the students' interests of speaking practice*.

3. A teacher of English found out that 10 M. 4 students got lower achievement scores than the criterion of 60%. From classroom observations, it was found that these students usually paid attention but they did not dare to ask the teacher in spite of not understanding the lessons. Therefore, the teacher decides to **improve these students' achievement scores by using peer remedial learning.**

3.1 An independent variable here refers to *peer remedial learning*.

3.2 A dependent variable here refers to *10 M.4 students' achievement scores*.

Example 2.6: Identifying research variables

2.4 Hypotheses of the English language classroom research

In language research, Nunan (1992) defines a research hypothesis that it is a *tentative answer* to a research problem, expressed in the form of a clearly stated relation between *the independent and the dependent variables* which can be tested through an *experiment*. When proposing a hypothesis, the researcher does not know whether it will be verified or not. A hypothesis is constructed and then tested. If it is rejected, another one is put forward; if it is accepted, it is incorporated into the body of scientific knowledge.

Research hypotheses share four common characteristics:

Characteristics of Research Hypotheses

- * **Hypotheses must be clear.** The researcher must define all of the variables conceptually and operationally.
- * **Hypotheses are specific.** The researcher points out the expected relations among the variables in terms of direction (positive or negative) and the conditions under which the relation will hold.

* *Hypotheses are testable with available methods.* The evaluation of a hypothesis depends on the existence of methods for testing it.

* *Scientific hypotheses are value-free.* Because research in the social sciences takes place in a social environment, the researcher must be aware of personal biases and make them as explicit as possible.

According to Example 2.5, hypotheses can be proposed based on the research problems or questions as in Example 2.7:

<p>1. Research question: Do three different teaching techniques have differing effects on Fundamental English achievement scores of M.1 students in School A?</p> <p>Hypothesis: <i>Three different teaching techniques have differing effects on Fundamental English achievement score of M.1 students.</i></p>
<p>2. Research question: Does a teacher correction of an error analysis by assigning writing tasks improve M.1 Students' writing skill?</p> <p>Hypothesis: <i>A teacher correction of an error analysis by assigning writing tasks improves M.1 students' writing skill.</i></p>
<p>3. Research question: Can listening practices guided by picture clues improve listening comprehension achievement of M.5 students?</p> <p>Hypothesis: <i>Listening practices guided by picture clues can improve listening comprehension achievement of M.5 student.</i></p>

Example 2.7: Proposing hypotheses based on the research questions

Note: In actual practices of the LCR, a hypothesis is an optional point.

References

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- Dick, Walter, Carey, Lou and Carey, O. James. (2001). The systematic design of instruction. 5th ed. U.S.A., Addison-Wesley Educational Publishers Inc.
- Nunan, David. (1989). Understanding language classrooms. Great Britain, Hall International Group.
- . (1992). Research methods in language teaching. U.S.A., Cambridge University Press.
- Wiersma, W. (1986). Research methods in education: An introduction. Boston, Allyn and Bacon.

Trainee's Self-evaluation

Direction: After studying the section of the basic elements of the LCR, the trainee will self-evaluate about the lesson learned, so question yourself and write in brief to check your understanding. If you are still in doubt, return to the lessons learned.

1) Major issues in English language classroom research

.....
.....
.....

2) Evaluating and developing English language classroom research problems

.....
.....
.....

3) Variables in the English language classroom research

.....
.....
.....

4) Hypotheses of the English language classroom research

.....
.....
.....

Test of Self-evaluation: Module 2 Basic Elements of English Language Classroom Research

1. The following choices are major issues in English language classroom research, except

- A. Teacher's instruction and behavior.
- B. Learner's behavior.
- C. Teacher's curriculum and instruction.
- D. Classroom interaction.

2. Which is not one of the issues of evaluating the problem of language classroom research?

- A. Learner language learning achievement
- B. Learner language development features.
- C. Learner language interaction.
- D. Learner tasks and strategies.

3. Which stage should be considered before the stage of considering the issues the problems concern?

- A. The stage of “What are the problems?”
- B. The stage of selecting problem issues.
- C. The stage of developing research questions.
- D. The stage of analyzing the research problems.

4. Which situation is an output analysis of a systematic approach?

- A. A teacher of English used an inappropriate summative test.
- B. A teacher of English does not usually use teaching materials.
- C. Most of M.2 students ignored practices and class assignments.
- D. M.2 students got lower achievement scores than the 60% criterion.

Direction: The following situation is for the questions 5-7: -.

“Does an error analysis of a teacher correction by assigning tasks improve M.3 student’s writing skill?”

5. For the sentence in the bracket, what is it called in the classroom research?

- A. A research problem analysis.
- B. A research question.
- C. A research hypothesis.
- D. A systematic approach.

6. What is the independent variable of classroom research?

- A. An error analysis of a teacher correction.
- B. A teacher correction by assigning tasks.
- C. An error analysis of a teacher correction by assigning tasks.
- D. M. 3 students’ writing skill.

7. What is the dependent variable of classroom research?

- A. M. 3 students’ writing skill
- B. An error analysis of a teacher correction
- C. An error analysis of a teacher correction by assigning tasks
- D. A teacher correction by assigning tasks.

8. What is not true about research hypotheses?

- A. It is a tentative answer to a research problem.
- B. It is the relation between the independent and dependent variables.
- C. It is strictly designed in an experimental research.
- E. The researcher has to design it in every type of research.

Self-development for Remedial Training Model: Module 2
Basic Elements of Language Classroom Research

Directions: *This section aims to show the answers from the post-test for the trainees to check. If you get the incorrect answers, revise the content of the LCR before you study the next modules: Follow the suggestion in each item.*

Item 1: The correct answer is C.
 Do you have the correct answer? [] Yes [] No
 If you have an incorrect one, return to revise Section 2.1, and then answer the question again.
 -Major issues of the LCR include

Item 2: The correct answer is A.
 Do you have the correct answer? [] Yes [] No
 If you have an incorrect one, return to revise Section 2.2, and then answer the question again.
 -Issues of evaluating the problems of the LCR comprise of

Item 3: The correct answer is B.
 Do you have the correct answer? [] Yes [] No
 If you have an incorrect one, return to revise Section 2.2, and then answer the question again.
 The stages of the problem analysis of the LCR contains are composed of

Item 4: The correct answer is D.
 Do you have the correct answer? [] Yes [] No
 If you have an incorrect one, return to revise Section 2.2, and then answer the question again.
 A systematic approach of problem analysis of the LCR includes

Item 5: The correct answer is B.
 Do you have the correct answer? [] Yes [] No
 If you have an in correct one, return to revise Section 2.2, and then answer the question again.
 The research question of the LCR is.....

Item 6: The correct answer is C.

Do you have the correct answer? Yes No

If you have an incorrect one, return to revise Section 2.3, and then answer the question again.

The independent variable of the LCR refers to

Item 7: The correct answer is A.

Do you have the correct answer? Yes No

If you have an incorrect one, return to revise Section 2.3, and then answer the question again.

The dependent variable of the LCR refers to

Item 8: The correct answer is D.

Do you have the correct answer? Yes No

If you have an incorrect one, return to revise Section 2.4, and then answer the question again.

The research hypothesis is

**If you have studied and revised your incorrect answers,
please continue in the next module.**

Structure of the ELCR Model: Module 3 Review of Related literature in English Language Classroom Research

Content

- 1) Definition and characteristics of related literature
- 2) Objectives, the importance and selection of related literature
- 3) Writing the report of related literature
- 4) Referencing

Background Concepts

- 1) The review of related literature is the study of information or the documents related to the issue of the research work that can be referred to information resources, textbooks, articles, and / or research reports. This can be classified as general references, primary literature, and secondary literature.
- 2) The review of related literature benefits the concepts, theories, procedures and the background information on the research questions.
- 3) The reliable related literature should be based on the correctness of knowledge for the research work, the abreast of the time, sufficient pictures, tables, graphs or maps, language use, sufficient references, expertise of the authors in any academic fields.
- 4) Writing up the research report should integrate the ideas or guidelines from different documents into one harmony content. Referencing containing citation and references is an essential and important part to indicate the sources of investigation.

Objectives

After studying the content in Module 3, trainees could be able to:

- 1) define and indicate the characteristics of related literature,
- 2) illustrate the objective, importance, and selection of related literature,
- 3) explain how to write a report of the related literature, and
- 4) write up the references of the related literature.

Training Activities

- 1) **Pre-training stage**, trainees
 - 1.1) do the pre-test on the review of related literature,
 - 1.2) check the survey of trainees' opinions on the lesson learned.

- 2) **Developmental stage**, trainees
 - 2.1) learn through the handouts of the review of related literature,
 - 2.2) discuss about what trainees have learned from trainee groups and the trainer.
- 3) **Application**, trainees
 - 3.1) self-evaluate the content of the review of related literature, and
 - 3.2) revise the content on the review of related literature.

Evaluation

- 1) Trainees do the post-test and feedback.
- 2) If trainees do the test incorrectly, they have to return to the content for revising.

3

Review of Related Literature in English Language Classroom Research

3.1 Definition and characteristics of related literature

3.1.1 Definition

As Wiersma (1986) a language researcher's view, *review of related literature* can be conclusively defined as the study of information or the documents related to the issue of the research work conducted. The related literature refers to information resources, textbooks, articles, and research reports that can facilitate the apparent definition of the research terms, and the framework of the research problems.

3.1.2) Characteristics of the literature review

The literature review as stated by the Academic Department, the Ministry of Education (2002) can be classified by its characteristics as follows:

1) *General references*

It contains a list of relevant studies relating to the research question or issue. These may range from *brief research reports to books*. The published literature review provides some idea of the length and details of the annotations, such as authors, titles, and publishing details. These references contain journal index, research abstracts and articles.

2) *Primary literature*

This type or non-data-based writing includes published media that reflect the writers' experiences or opinions and can range from theoretical to popular documents. The content is valid and reliable for research work. These texts contain academic articles, research articles, research reports and theses.

3) *Secondary literature*

This type of literature contains the published documents that the authors gather and study from the original texts as the data-based literature of empirical information collected by the researcher. These comprise books, dictionaries, encyclopedias, handbooks, and annual reports.

In terms of language teaching, numerous resources of research and abstracts exist to facilitate the literature review process, and most of these can be found in the data-based website of research or in university or college libraries. Finally, there are specialized abstracting journals such as '*Language Teaching*', which provide summaries of recently published journal articles.

3.2) Objectives, the importance and selection of related literature

The related literature is essential for the research project as Nunan (1992) suggests, it needs objectives, importance and selection as follows:

3.2.1) Objectives

The literature review aims to:

- 1) facilitate the research questions or problems, and hypotheses,
- 2) explain the relation among research variables,
- 3) study the concepts, theories, and procedures to explain the apparent research problems,
- 4) be the guidelines of the research for the suitable problems, and the interpretation of the research results, and
- 5) be the guidelines for research reports and the evaluation in terms of academic knowledge and economics.

3.2.2) Importance

An essential step in any research project is the literature review. Nunan (1992) suggests the importance in terms of its function of the literature review, as the following points:

- 1) It provides the background information on the research question.
- 2) It identifies what other researchers have said and / or discovered about the questions.
- 3) The course of carrying out the literature review helps the researcher come across a study which answers the very question he/she is proposing to investigate.
- 3) The literature review, if carried out systematically, will guide the researcher with previous work in the field, and help find the problems and potential pitfalls in the chosen area.

3.2.3) Selection

There are different sources of research documents selected to benefit the research conducted based on the following criterions:

- 1) correctness of knowledge contents for the research work,
- 2) new knowledge for the research to be conducted,
- 3) correct, clear, and sufficient pictures, tables, graphs or maps,

- 4) easy, reasonable, unbiased language use, and sufficient references used by the researchers for conducting the research,
- 5) expertise of the authors in any academic fields, and
- 6) reliable sources of publishing.

3.3) Writing the report of the related literature

Writing reports of related literature for the language classroom research includes 2 principles as the subsequent aspects:

1) Organizing the report

Before writing, the sequence of the related literature has to be outlined. Practically, there should be different topics. Outlining the related literature should contain two parts:

Part 1 comprises of: 1) definition, 2) theoretical framework, and 3) patterns of variable relation, and

Part 2 comprises of related research conducted with both domestic research and research from abroad.

CHAPTER 2

Review of Related literature

(Introduction).....

2.1 Definition and theoretical framework (Part 1)

2.1.1 Definition and importance

2.1.2 Theoretical framework

2.1.3

2.1.4

2.1.5 (conclusion)

2.2 Related research (Part 2)

2.2.1 Domestic research

2.2.1 Research from abroad(conclusion)

3.4 Referencing

Referencing is an essential and important part of writing up the research report. This part indicates that the researcher has studied and adopted the appropriate informational sources by the quotations, paraphrases or summaries used for the research. The objective of referencing covers two points as follows:

1) To be ethical and honor the original writer, who is the owner of the ideas and information, and

2) To facilitate the next investigation if the reader is interested in that research works and aims to further investigation.

Referencing in a report can appear in two ways:

1) Citation in the context.

This part of referencing indicates the sources of the information adopted. It may be quoted in brackets as in Example 3.2, direct citations quoted as follows:

(Name-surname. Year : Page No. referenced)

Second language classroom research *means* a research that is carried out in the language classroom for the purpose of answering important questions about the learning and teaching of foreign languages.(Nunan, David. 1990: 1)

Example 3.2: Referencing by a direct quotation

In the case of re-editing a conclusion, the researcher's language use can enhance the research report to be more concise. It is illustrated in Example 3.3

The scope of L2 classroom research includes in five themes; 1) the nature and development of interlanguage, 2) the role of communication and interaction, 3) the use of strategies, 4) variations in learning styles and modes, and 5) the centrality of evaluation, including feedback and knowledge of results. (Lier, Leo van. 1988: 27-28)

Example 3.3: Referencing by a re-editing or conclusion

2) References and bibliography

The final part of the report includes different sources of references or bibliography that appear in content citation. This part facilitates the reader for further investigations.

Reference contains the collection of referencing lists appearing in the report.

Bibliography contains the collection of references adopted for the report from both the citation quoted and unquoted in the content.

Writing lists of references has different forms which contain details of referencing as shown in the following cases:

1) Books

Author. (Year). Book title. Edition. Place of printing: Name of publisher.

2) Articles from journals

Author. (Year). "Title of article". Journal title. Volume: Pages.

3) Articles from newspapers

Author. (Year). "Title of article". Newspaper title. Day/month/year and Volume. Pages.

4) Personal research reports

Researcher. (Year). Research report title Place of printing: Publisher.

5) Theses

Researcher. (Year). Thesis title . Degree of graduation. Place of printing. University name.

Principles of reference sequences

- 1) If an author is a Thai, write the first name and last name, but foreigners, write the last name, and the first name respectively.
- 2) Write the Thai authors and followed by the authors of foreigners.
- 3) In Thai and English names, write the references alphabetically.
- 4) If more references are written by an author, arrange by the printing years.

References

- Academic Department, Ministry of Education. (2002). Research for developing learning for Basic Education Curriculum. Bangkok: Kurusapha.
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Trainee's Self-evaluation

Directions: After studying the section of the literature review of the LCR, you as a trainee will evaluate yourself about the lessons learned. Question and write in brief to check your understanding. If you are still in doubt, return to the lessons learned.

1) Definition and characteristics of related literature

.....

2) Objectives, the importance and selection of related literature

.....

3) Writing the report of the related literature

.....

4) Referencing

.....

Test of Self-evaluation: Module 3 Review of Related Literature of English Language Classroom Research

1. What does the “review of related literature” refer to?

- A. The inquiry of every type of research literature.
- B. The study for the knowledge of related literature.
- C. The study for every issue of related literature textbooks.
- D. The inquiry of research issues from the related literature.

2. Which issue is the review of related literature the most helpful for?

- A. Regulating the research problems.
- B. Avoiding doing the same research topics.
- C. Limiting the research framework.
- D. Fixing the research design and methodology.

3. When should the related literature be studied in different stages?

- A. Before the research problems or questions.
- B. After the research problems or questions.

<p>C. Before setting the research objectives. D. After limiting the research methods.</p>
<p>4. Which is not a criterion of selecting the related literature? A. The author not having any experiences. B. The abreast of the time for the research conducted. C. Correct, clear, and sufficient pictures, tables, graphs or maps. D. Easy, reasonable, unbiased language use, and sufficient references.</p>
<p>5. Which is not a principle of writing the report for related literature? A. Integrate different related literature into one harmonious content. B. Outline the related literature in different topics. C. Report and discuss only relevant research results. D. Report and discuss relevant and contrasting research results.</p>
<p>6. Which is true according to writing the report for related literature? A. Report from the previous research abstracts. B. Report from the year of printing in each paragraph. C. Select only the relevant report for the research objectives. D. Synthesize different results into the harmonious idea.</p>
<p>7. Which is not the objective of review of related literature? A. To find out the research title. B. To find out the suggestion for the research implication. C. To find out the research methods. D. To find out the research hypothesis.</p>
<p>8. What are the components of the research citation? A. Author / year of printing / and page No. B. Author / year of printing / and publisher. C. Author / publisher / and page No. D. Author / publisher / and place of printing.</p>

Self-development for Remedial Training Model: Module 3
Review of Related Literature in Language Classroom Research

Directions: *This section aims to show the answers from the post-test for the trainees to check. If you get the incorrect answers, revise the content of the LCR before you study the next module: Follow the suggestion in each item.*

Item 1: The correct answer is D.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 3.1, and then answer the question again.

- The “review of related literature” refers to

.....
.....

<p>Item 2: <u>The correct answer is C.</u></p> <p>Do you have the correct answer? [] Yes [] No</p> <p>If you have an incorrect one, return to revise Section 3.2, and then answer the question again.</p> <p>- The review of related literature is the most helpful for the issue of</p> <p>.....</p>
<p>Item 3: <u>The correct answer is B.</u></p> <p>Do you have the correct answer? [] Yes [] No</p> <p>If you have an incorrect one, return to revise Section 3.2, and then answer the question again.</p> <p>-The related literature should be studied in different stages of.....</p> <p>.....</p>
<p>Item 4: <u>The correct answer is A.</u></p> <p>Do you have the correct answer? [] Yes [] No</p> <p>If you have an incorrect one, return to revise Section 3.2, and then answer the question again.</p> <p>-The criterion of selecting related literature includes</p> <p>.....</p>
<p>Item 5: <u>The correct answer is C.</u></p> <p>Do you have the correct answer? [] Yes [] No</p> <p>If you have an incorrect one, return to revise Section 3.3, and then answer the question again.</p> <p>-The principle of writing a report of related literature includes</p> <p>.....</p>
<p>Item 6: <u>The correct answer is D.</u></p> <p>Do you have the correct answer? [] Yes [] No</p> <p>If you have an incorrect one, return to revise Section 2.3, and then answer the question again.</p> <p>-Writing the report for related literature should be based on</p> <p>.....</p>
<p>Item 7: <u>The correct answer is B.</u></p> <p>Do you have the correct answer? [] Yes [] No</p> <p>If you have an incorrect one, return to revise Section 3.2, and then answer the question again.</p> <p>-The objectives of the review for related literature contains</p> <p>.....</p>

**If you have studied and revised your incorrect answers, please continue
in the next module.**

Structure of ELCR Model: Module 4 Innovation Development in English Language Classroom Research

Contents

- 1) Definition and characteristics of innovations
- 2) Category of innovations
- 3) The role and development of instructional innovations
- 4) Example cases of innovation development

Background Concepts

1) Innovations in the language teaching and classroom research can be defined as proposals for qualitative change in pedagogical materials, approaches, and values that are perceived as new by individuals who comprise a formal language education system. Innovation characteristics imply a different pattern of classroom activities and attributes of the proposals.

2) The innovation development in the process of classroom research is defined basing on major issues of the L2 classroom research; such as: 1) innovations based on instruction and teacher talk, including authentic and created materials, and 2) teaching and learning process innovations including a variety of L2 teaching approaches. Innovation development based on learner behavior and interaction includes: 1) understanding of the course, 2) view of learning, or learning styles, 4) motivation and, 5) support. These components can be the background of the classroom innovations.

3) The instructional innovations can be the attributes of the language classroom improvement, since they can be a major source for teachers' research and development of language teaching. The innovation development needs systematic methods to assess the efficiency of the innovation materials for research implication in classrooms.

4) There are a variety of example cases in developing classroom research innovations with different approaches and innovative materials.

Objectives

After studying the content in Module 4, trainees could be able to:

- 1) define and indicate the characteristics of innovations in the LCR.
- 2) categorize instructional innovations in language teaching and classroom Research.

- 3) point out the role and how to develop the instructional innovations for English language classroom research.
- 4) exemplify different cases of innovation development in language teaching and classroom research.

Training Activities

- 1) **Pre-training stage**, trainees
 - 1.1) do the pre-test on the innovation development
 - 1.2) check the survey of trainees' opinions on the lessons learned
- 2) **Developmental stage**, trainees
 - 2.1) learn through the handouts of the innovation development
 - 2.2) discuss about what trainees have learned among the trainee group and the trainer
- 3) **Application**, trainees
 - 3.1) self-evaluate the content of the innovation development
 - 3.2) revise the content of the innovation development

Evaluation

- 1) Trainees do the post-test and feedback.
- 2) If trainees do the test incorrectly, they have to return to the content for revising.

4

Innovation Development in English Language Classroom Research

4.1 Definition and characteristics of innovation in the ELCR

4.1.1 Definition

The definition of innovation in English language teaching is defined by Markee (2001) as proposals for qualitative change in pedagogical materials, approaches, and values that are perceived as new by the individuals who comprise a formal language education system.

4.1.2 Characteristics

In terms of second language acquisition (SLA), the characteristics of innovation are a new perception in pedagogy, implying a different pattern of classroom activities that involves the consideration of four sets of factors (Ellis, 1994):

1) The sociocultural context of the innovation

The success of innovation in any proposal emanating from SLA (or any other source) regarding classroom practices may be determined by institutional, educational, administrative, political, or cultural factors.

2) The personality and skills of individual teachers

The success of innovation will also depend on the personality and qualities of individual teachers. Personal factors are likely to play a major part in determining which category of innovation a teacher belongs to.

3) The method of implication

The method of implication is likely to influence to what extent an innovation takes root. Three basic models of innovation include:

3.1) A research, development and diffusion model which views the researcher as the originator of proposals and the teachers as consumers and implementers of them.

3.2) The problem-solving model which involves engaging teachers in identifying problems, researching possible solutions and then trying them out in their teaching.

3.3) A social interaction model which emphasizes the importance of social relationships in determining adoption of the model and emphasizes the role of communication in determining uptake of an innovative idea.

To sum up, these three models parallel the approaches to relating research and pedagogy. That is, the research development and diffusion model reflects the positivist, technical view; the problem solving model reflects the call for teacher research, while the importance placed on communication in the social interaction model mirrors that placed on discourse in critical action research.

4) Attributes of the proposals themselves

The fourth set of factors governing the uptake of innovative proposals concerns the attributes of the proposals themselves. The principal attributes discussed below are listed in Table 4.1 (Kelly; 1980, Rogers; 1983, and Stroller; 1994), together with brief definitions.

Attributes	Definitions
<i>Initial dissatisfaction</i>	The level of dissatisfaction that teachers experience with some aspect of their existing teaching.
<i>Feasibility</i>	The extent to which the innovation is seen as implemental given the conditions in which teachers work.
<i>Acceptability</i>	The extent to which the innovation is seen as compatible with teachers existing teaching style and ideology.
<i>Relevance</i>	The extent to which the innovation is viewed as matching the needs of the teachers' students.

Attributes	Definitions
<i>Complexity</i>	The extent to which the innovation is difficult or easy to grasp.
<i>Explicitness</i>	The extent to which the rationale for the innovation is clear and convincing.
<i>Triability</i>	The extent to which the innovation can be easily tried out in stages.
<i>Observability</i>	The extent to which the results of innovation are visible to others.
<i>Originality</i>	The extent to which the teachers are required to demonstrate a high level of originality in order to implement the innovation (e.g. by preparing special materials).
<i>Ownership</i>	The extent to which teachers come to feel that they 'possess' the innovation.

Table 4.1: Principal attributes of innovations

These sets of factors influence the uptake of innovative ideas. Makee (2001) suggests that innovations in the form of the development and use of new teaching materials constitute the easiest kind of change with proven success.

4.2 Category of innovations in the ELCR

The innovation development in the process of the classroom research is categorized in the major issues of L2 classroom research, as stated by Chaudron (1988): 1) *learning from instruction*, which involves the L2 acquisition between the theory of teaching and syllabus design, 2) *teacher talk* called teacher speech rate in classroom settings including syntax, vocabulary, or pragmatic functions, 3) *learner behavior* involving learning styles, social interactions or tasks, and 4) *interaction in the classroom*, involving student speech events or conversation.

From four major issues in the LCR, the innovation development can be categorized in two main aspects:

4.2.1 Innovations based on instruction and teacher talk

1) Teaching material innovations

Richards (2001; 251) classifies language teaching materials in the forms of:

- a) printed materials* such as books, workbooks, or worksheets,
- b) non-printed materials* such as cassettes or audio materials, videos, or computer-based materials,
- c) materials that comprise both print and non-print sources*, such as self-access materials and materials on the Internet, and
- d) materials not designed for instructional use (authentic)*, such as magazines, newspaper, and TV materials.

From four types of material innovations for language teaching, they can be categorized into two main types of authentic and created materials. The definitions, advantages and criticisms are indicated in Table 4.2:

Structure of LCR Model : Module 4

Authentic materials	Created materials
1. Definitions	
<i>-Authentic materials</i> refer to the use of texts, photographs, video selections, and other teaching resources that are not specially prepared for pedagogical purposes	<i>-Created materials</i> refer to textbooks and another specially developed instructional resources, such as workbooks, cassettes, and teachers' guides, the common form of teaching materials in language teaching
2. Advantages of use	
1. <i>They have a positive effect on learner motivation</i> because they are actually more interesting than created materials.	1. <i>They provide structure and a syllabus for a language program.</i> Without textbooks a program may have no central core and learners may not receive a syllabus that has been systematically planned and developed.
Authentic materials	Created materials
2. <i>They provide authentic cultural information about the target culture.</i> Materials can be selected to illustrate many aspects of the target culture including practices and beliefs and both linguistic and non-linguistic behavior.	2. <i>They help standardize instruction.</i> The use of textbook in a program can ensure that the students in different classes receive similar content and therefore, can be tested in the same way.
3. <i>They provide exposure to real language</i> rather than the artificial texts found in created materials that have been specially written to illustrate particular grammatical rules or discourse types.	3. <i>They maintain quality.</i> If a well-developed textbook is used, students are exposed to materials that have been tried and tested, that are based on the sound learning principles..
4. <i>They relate more closely to learners' needs</i> and so provide a link between the classroom and students' needs in the real world.	4. <i>They provide a variety of learning resources.</i> Textbooks are often accompanied by workbooks, CDs and cassettes, videos, CD-ROM, and comprehensive teaching guides, providing a rich and varied resource for teachers and learners.
5. <i>They support a more creative approach to teaching.</i> As a source for teaching activities, teachers can develop their full potential, developing activities and tasks.	5. <i>They can provide effective language models and inputs.</i> Textbooks can provide support for teachers whose first language is not English and who may not generate accurate language inputs on their own.
3. Critics of use	
1. <i>Authentic materials often contain difficult language</i> and unneeded vocabulary items, since they have not been simplified or may be beyond the learners' abilities.	1. <i>They may contain inauthentic language,</i> and are often not representative of real language use.
2. <i>Using authentic materials is a burden for teachers.</i> Teachers have to prepare and spend much time locating suitable sources for materials and developing activities.	2. <i>They may not reflect students' needs</i> because textbooks are often written for global markets, they may not reflect the interests and needs of students.
	3. <i>They may reduce the teacher's role to a technician</i> because of using textbooks as the primary source of teaching,
	4. <i>They are expensive</i> for teachers and students.

Table 4.2: Authentic versus created materials (Adapted from Richards', 2001)

2) Teaching and learning process innovations

Teaching models are often based on particular methods or approaches. Richards (2001) exemplifies them as follows:

a) The communicative approach: The focus of teaching is authentic communication; extensive use is made of pair and group activities that involve negotiation of meaning and information sharing. Fluency is a priority.

b) The cooperative learning model: Students work in cooperative learning situations and are encouraged to work together on common tasks and to coordinate their efforts to complete tasks. Reward systems are group-oriented rather than individually oriented.

c) The process approach: In writing classes, students take part in activities that develop their understanding of writing as a process. Different stages in the writing process (planning, generating ideas, drafting, reviewing, revising, editing) form the focus of teaching.

d) The whole-language approach: Language is taught as a whole and not through its separate components. Students are taught to read and write naturally, with a focus on real communication, authentic texts, and reading and writing pleasure.

Moreover, instructional process innovation as the Academic Department of the Ministry of Education (2002) proposes the following teaching and learning models:

e) Learner-centered language curriculum: This model emphasizes the knowledge of students' language use and language learning as their needs and interests in the informed instruction manner and self-directed manner.

f) Language for specific purposes: This method is called English for specific purposes and emphasizes on language as an instrument for academic and career purposes.

g) Integrated learning: A learning strategy that offers questioning and problem-solving, relating other learning subjects to real-life learning.

h) Project-based learning: Learners cooperate in learning on a project that they aim to study within a time limit. The outcome of the study results as the learning goal.

j) Content-based instruction curriculum: Instruction is based on the different contents integrated with language learning objectives.

k) Constructivist model: The constructivist model of language acquisition has strongly influenced language curriculum design. It is widely accepted that learners use their own strategies and mental processes to sort out the system that operates in the language with which they are presented.

l) Total physical response (TPR): It is a method of language teaching in which the importance of understanding and acting upon a sequence of instructions is stressed, particularly, in the earliest stages of learning a language. The method stresses the importance of aural comprehension and of learning by doing.

m) 4 MAT'S learning: This method enhances learners' analytical thinking ability from perceived concrete experiences. Learners link new teaching and learning process knowledge to their previous experiences and integrate the practices.

In brief, category of innovations in the LCR is summarized in Figure 4.1:

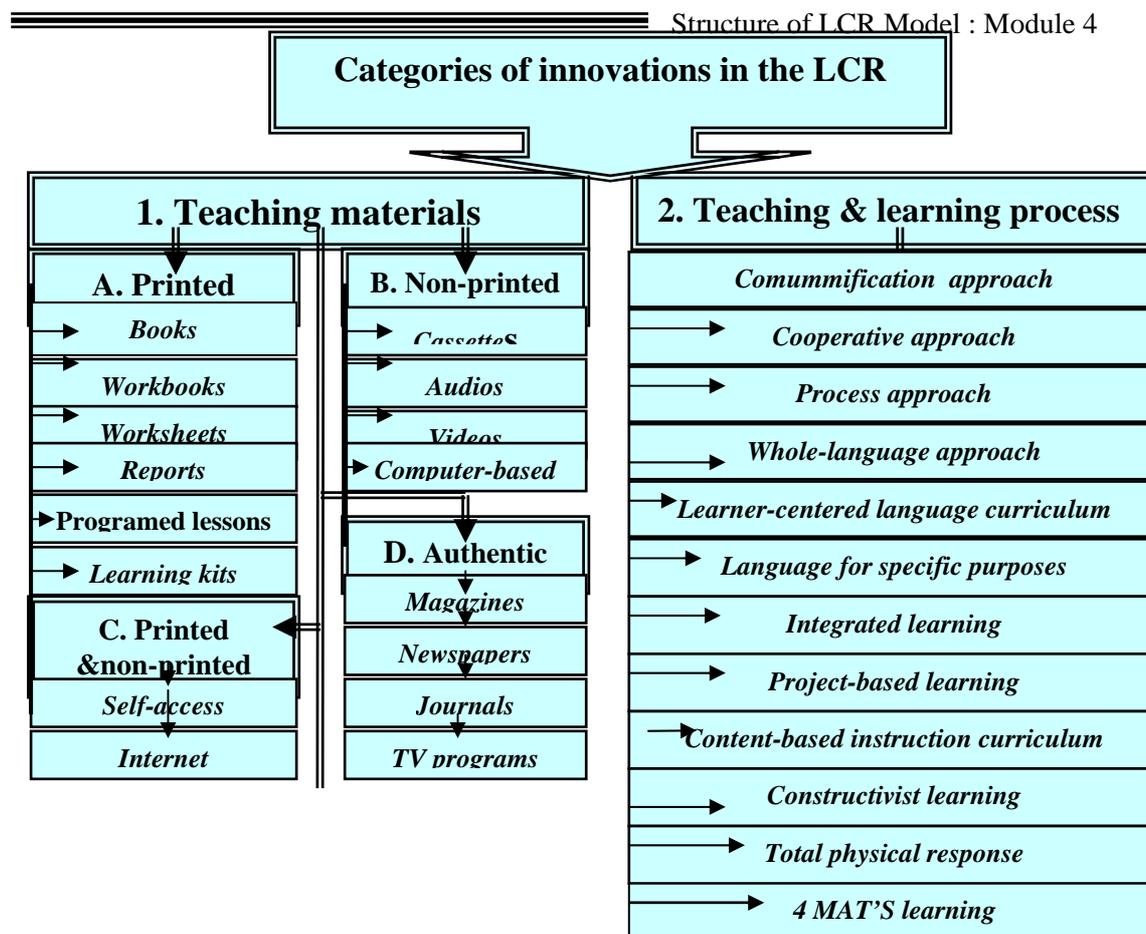


Figure 4.1: Categories of innovations in the LCR

In respect to teaching and learning process innovations, guidelines of approaches and methods adopted for actual learning and teaching can be summarized in Table 4.3.

Approaches	Objectives	Contents	Modes	Evaluation
<i>Communicative approach</i>	<i>Communication of four skills</i>	<i>Currently meaningful language with related skills</i>	<i>Language for communication</i>	<i>Communicative skills emphasizing fluency and correctness</i>
<i>Cooperative approach</i>	<i>Promote communicative and social skills</i>	<i>Any selective contents</i>	<i>Stress on group process, structure, and sequence in different models</i>	<i>Self- and peer evaluation</i>

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Process approach	Writing process	Different stages of writing	Taking part in writing activities	-Teacher and student correction
Whole-language approach	<i>Integrating all language skills with other subjects</i>	<i>Meaningful contents for learners</i>	<i>Learners' participation and interaction</i>	<i>Participation and learning outcomes</i>
Learner-centered language curriculum	<i>Knowledge and language competency</i>	<i>Language skills and learning skills</i>	<i>Autonomous learning, learners' participation and practices</i>	<i>Self-evaluation</i>
Language for specific purposes	<i>Specific skill and content of career</i>	<i>Academic and specific career</i>	<i>Communicative language and task-based learning</i>	<i>Specific content and skill</i>
Integrated learning	<i>Linking lessons to real life and whole language learning</i>	<i>Knowledge and related skills of other subjects</i>	<i>Connection between knowledge and skills from other subjects for problem solving</i>	<i>-Learners' participation -Group work -Learning outcomes</i>
Project-based learning	<i>Autonomous learning and connection between the whole language and current life</i>	<i>Activities in actual situations, learning methods and systematic knowledge collection</i>	<i>Learning to do activities and cooperative studying</i>	<i>Students' plans, responsibilities, and success of tasks</i>
Content-based instruction curriculum	<i>Communicative learning as an instrument for learning</i>	<i>Connection to other subjects</i>	<i>Integrated four language skills</i>	<i>Language skills and subject contents</i>
Constructivist learning	<i>Autonomous learning and exchanged learning</i>	<i>Language skills of listening, speaking, reading and writing</i>	<i>Use different strategies for learners' chances to express abilities and opinions</i>	<i>Assigned learners' different tasks</i>

Structure of LCR Model : Module 4				
<i>Total physical response</i>	<i>Practice remembering and doing</i>	<i>Imperative, vocabulary and grammar</i>	<i>Teachers as modes in giving directions</i>	<i>Observation following to instructions</i>
<i>4 MAT'S learning</i>	<i>Improve thinking and integrating experiences</i>	<i>Contents from different subjects</i>	<i>Stress on experienced integration</i>	<i>Self- and peer evaluation</i>

Table 4.3: Summary of language teaching as classroom innovations

4.2.2 Innovation development based on learner behavior and interaction

Whether or not teaching achieves its goals will depend on how successfully learners have been considered in the planning and delivery process. The following factors may affect how successfully a course is received by learners (Richards, 2001).

1) Understanding of the course

It is important to ensure that the learners understand the goals of the course, the reason for the way it is organized and taught, and the approaches to learning they will be directed to take.

2) Views of learning

Learners approach a course with their own views of teaching and learning and these may not be identical to those of their teachers. How do they see the roles of teachers and learners? What do they feel about such things as memorization, group work, the importance of grammar, and pronunciation? Courses may assume a variety of different learner roles, such as:

- management of his or her own learning
- independent learner
- needs analyst
- collaborator and team member
- peer tutor

3) Learning styles

Learners' learning styles may be the background of creating classroom innovations and an important factor in the success of teaching and may not necessarily reflect those that teachers recommend. In a study of the learning styles of the adult ESL students, Willing (1985, cited in Nunan, 1988; 93) found four different learner types in the population he studied, these are shown in Table 4.4:

***Concrete learners:** These learners preferred learning by games, pictures, films and video, talking in pairs, learning through the use of cassettes, and going on excursions.

***Analytical learners:** These learners liked studying grammar, studying English books, studying alone, finding their own mistakes, having problems to work out, and learning through reading newspapers.

<p>*Communicative learners: This group liked to learn by observing and listening to native speakers, talking to friends in English, watching TV in English, using English in shops, and so on, learning English words by hearing them and learning by conversations.</p>
<p>*Authority-oriented learners: These students liked the teacher to explain everything, writing everything in a notebook, having their own textbook, learning to read, studying grammar, and learning English words by seeing them.</p>

Table 4.4: Summary of learning styles for creating classroom innovations

A questionnaire on preferred learning styles, classroom activities, and teaching approaches can be used to identify learners' learning styles preferences.

4) Motivation

It is important to find out what the learners' motivations are for taking the course. Why are the learners in the course and how will it affect their lives? What do they want from it? Which aspects of it are they most interested in? For example, Brindley (1984; 119) cites the following preferences for three learners in an adult ESL class in Australia, to show how individual learner choices may differ markedly. In such cases, counseling and individualized instruction may be needed as in Table 4.5: In this course I want to:

Learners (rated from 10 marks)	1	2	3
Understand English grammar better	2	3	3
Write English more fluently and correctly	1	7	5
Understand radio and TV better	5	6	6
Know more about Australian culture	3	2	4
Understand Australians better when they speak to me	6	1	1
Read and understand newspapers better	4	4	2
Communicate better with my workmates	10	5	9
Learn more vocabulary	8	10	9
Learn how to spell it better	9	8	8
Learn how to pronounce English better	7	9	7

Table 4.5: Example of a questionnaire to survey students' motivation

5) Support

Support mechanisms provided for learners are another component of course delivery. These include the kinds of feedback learners will get about their learning, and opportunities that are provided for faster or slower learners. Self-access components might be provided to allow learners to address specific learning needs and interests.

The above discussion of five components of the learning process including understanding of the course, views of learning, learning styles, motivation and support, can be the background of the English language classroom research. Except for learners' learning achievements, teachers can adopt these factors to enhance learners' language proficiencies based on the classroom situations.

4.3.1) The role

The roles of instructional innovations in terms of different kinds of materials in language teaching are:

- * a resource for presentation materials (spoken and written)
- * a source of activities for learners practice and communicative interaction
- * a reference source for learners on grammar, vocabulary, pronunciation, etc
- * a source of stimulation and ideas for classroom activities
- * a syllabus (where they reflect learning objectives that have already been determined)
- * a support for less experienced teachers who have yet to gain in confidence
- * a support and source of the classroom research conduct

4.3.2 The development

1) Characteristics of the innovation development

To design the materials in the innovation development of the classroom research, good materials do many of the things that a teacher would normally do as part of his or her teaching. They should:

- arouse the learners' interest
- remind them of earlier learning
- tell them what they will be learning next
- explain new learning content to them
- relate these ideas to learners' previous learning
- get learners to think about new content
- help them get feedback on their learning
- encourage them to practice
- make sure they know what they are supposed to be doing
- enable them to check their progress
- help them to do better

2) Procedures

The process of the innovation development includes the following:

Stage 1: *Developing learning objectives*

This phase is done after analyzing learning problems. A teacher aims to develop learners' preferred characteristics, i.e. the improvement of language skills of listening, speaking, reading, writing, language learning motivation, or creative thinking in the writing process.

Stage 2: *Framing learning process*

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After developing the learning objective, a teacher studies theoretical principles and research reports on the improvement of language learners integrated with teacher's teaching experiences. Then, a framework for the learning process can be made to develop an innovative model to improve classroom products.

Stage 3: *Developing innovative models*

After selecting an innovative model, a teacher studies the details of that model, for example, programmed instruction for learning grammar of M.3 students. Therefore, a teacher has to study the process of programmed instruction.

Stage 4: *Trailing the innovative models*

This stage is to assess the efficiency of the innovative model. The method of trialing covers the following steps (Sukhothaithammatirat, 1994): -

4.1) *One to one trial*

This step allows one subject to study the model and answer the questions. The teacher notes the responses and the reasons why the answers are wrong. The data gained will be used for improving the model.

4.2) *Small-grouped trial*

This step allows 6-10 subjects of mixed learning abilities to do the pre-test, learn the contents of the model, and do the post-test. Notes are taken on the problems occurring. The results will be used for improving the model for the next step of trial.

4.3) *Field trial*

This step allows 40-100 subjects of mixed learning abilities to do the pre-test, let them learn, and then do the post-test. The learning outcome from trialing the model is calculated to find out its efficiency.

Stage 5: *Assessing the efficiency of innovation*

5.1) *Calculation:* In this step, the efficiency of a packaged lesson as standard criterion is assumed to be **90/90 by the E1/E2 formula**. More details are as follows:

E1 is defined as the efficiency of process of the learners' continuous behavior evaluation considered from operating scores from the activities. The scores can be calculated by the formula below:

$$E1 = \frac{\text{Mean score}}{\text{Total score}} \times 100$$

While, mean score = $\frac{\text{Total score from every activity}}{\text{Total number of subjects}}$

E2 is the final evaluation derived from the score of post-test to find out the efficiency as follows:

$$E2 = \frac{\text{Mean score}}{\text{Total score}} \times 100$$

$$\text{While, mean score} = \frac{\text{Total score from every activity}}{\text{Total number of subjects}}$$

5.2 Efficiency acceptance: After the field trial, the E1/E2 values of the criterion are compared. Acceptance of efficiency is divided in three levels:

- 1) Higher criterion that values higher than 205%.
- 2) Equal criterion that values equal to or higher than 205%.
- 3) Lower criterion that accepts to have efficiency when it values lower but not lower than 2.5%.

Example 5.1: An English teacher used a packaged instruction of “ Articles” to assess 15 M.3 students’ learning outcome by the criterion of 80/80. The result is shown as in Table 4.6 to find out the efficiency of the packaged instruction.

Student No.	Scores from activities (E1)				Scores of post-test (E2) =40
	Activity 1 (15)	Activity 2 (10)	Activity 3 (15)	Activity 4 (10)	
1	10	9	14	9	34
2	12	8	13	7	35
3	14	7	12	8	34
4	10	8	14	7	30
5	9	5	14	8	32
6	14	6	12	7	33
7	13	8	10	9	32
8	10	7	10	9	33
9	12	8	12	9	31
10	14	7	14	7	30
11	11	9	14	7	33
12	12	9	14	8	32
13	10	7	12	7	30
14	13	8	13	6	34
15	15	9	14	9	36
Total	179	115	192	117	
	603 = 80.40%				489 = 81.50

Table 4.6: Example of data to find out the innovative efficiency

The calculation using the formula on the previous page can be summarized that the assessment result from activities reveals 80.40%. While the assessment of the post-test reveals 81.50%. Based on the criterion of 80/80, the result of the efficiency assessment of this packaged instruction equals to 80.40/81.50, higher than the criterion. Therefore, this package model is effective.

The process of innovation development in English language classroomresearch can be summarized in Figure 2 below:

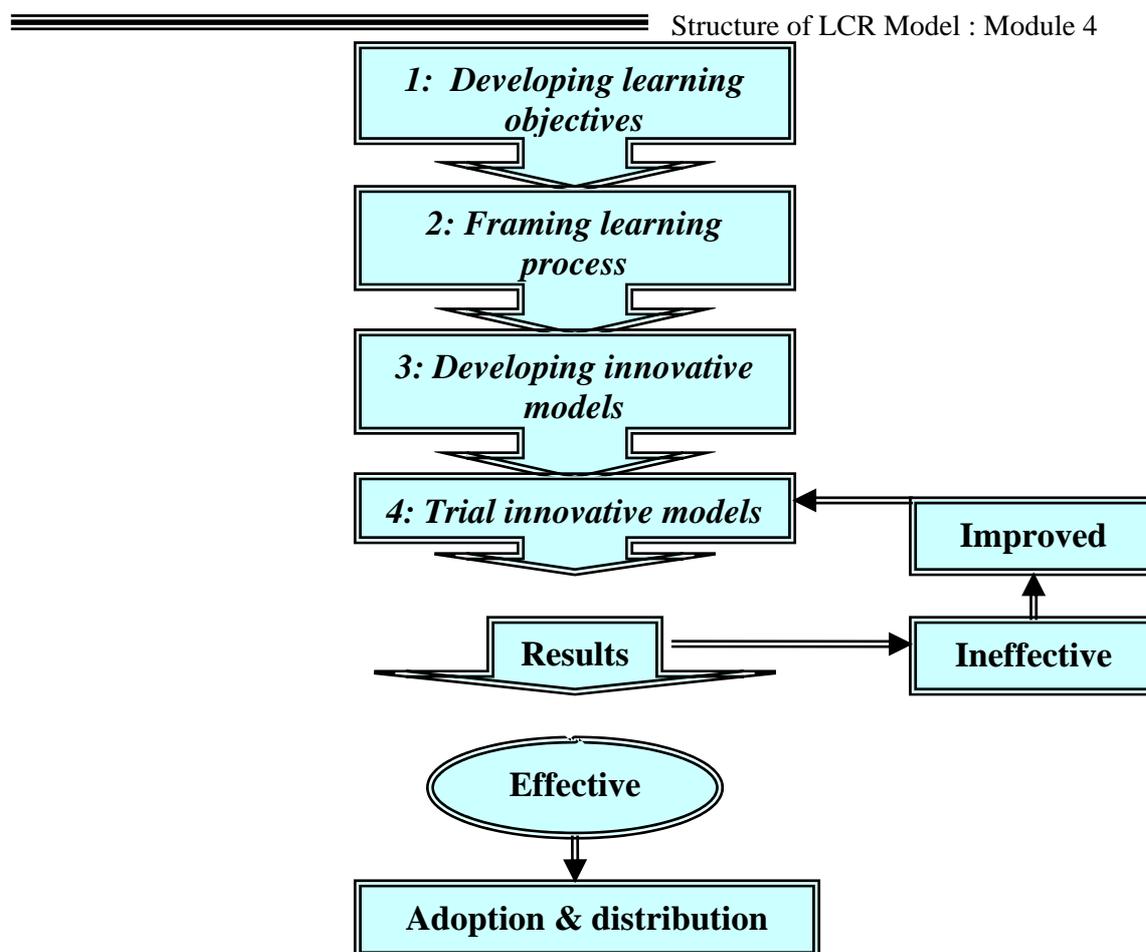


Figure 4.2: Summary of innovative development process

4.4 Example cases of innovation development in the ELCR

This section illustrates different example cases of instructional innovations that teachers currently practice in the English language classroom research. These examples conducted both in Thai and foreign settings are shown in Table 4.7:

Titles / Researchers	Process/Instruments
1. A lesson of multi-media for a reading skill course (E 051), M.3 students (Prompun Rittikul, Bangkok)	-An experiment by using a packaged instruction of multi-media for improving reading skill.
2. A study of English words and reading literature (Surachai Boonyanusit, Nakornratchasima)	-An experiment by using an academic textbook written for improving students' reading ability
3. Improving reading comprehension ability and learning attitude of Prathom 5 Students (Academic Department, 2002)	-An experiment by using a packaged instruction for improving reading comprehension and the test of students' attitude after learning

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4. A construction of a supplementary book for reading English short stories (Wasana Kwangtid, Bangkok)	-An experiment of Prathom 6 students -English short story and reading exercises
5. The development of the effective practice model for vocabulary familiarity for Prathom 1 students (Teeranun Tanon, 1998)	-An experiment by using a practice model of vocabulary from 3 topics. -Vocabulary practice model, the handbook for teacher, pre- and post tests, record of students' behaviors
Titles / Researchers	Process/Instruments
6. Report of using a reading comprehension package for Prathom 5 students (Sasithorn Poolthong, 1997)	- An experiment by using supplementary book for reading, lesson plans, practice exercises, pre- and post-tests, and attitude questionnaire
7. Efficiency of concentrated language encounters : CLE for Prathom 5 Students (Nothai Udomboonyanubhab, 1996)	-An experiment by a teaching approach -Learning units by CLE integrated skills -Pre- and post tests
8. Remedial teaching of English reading skill by the reciprocal teaching approach for M.3 Students (Jira Ornsa-kul, 2001)	-An experiment by a teaching method -Lesson plans for reading of reciprocal teaching -Test of reading comprehension
9.Improving the writing skill by mastery learning process for Prathom 6 students (Yuppadee Kajawong, 1996)	-An experiment by using the mastery learning process for remedial teaching -Record of students' learning progress -Pre- and post-tests
10. Using lesson plans emphasized on listening skill activities for M.2 students (Sureerut Kleepkomutti, 2000)	-An experiment by using teaching activities from lesson plans -Listening stages and activities -Post-test compared to the criterion
11. An error analysis of English compositions written by M.6 students (Prayoon Chownahe, 2000)	-An experiment by using linguistic approach to error correction -Remedial lesson plans and teaching -Pre- and post-tests
12. The effects of using English listening comprehension lessons on improving listening skill of M.6 students (Prayoon Chownahe, 2001)	-An experiment by using lessons on listening comprehension with picture clues -4 listening lessons -Pre- and post-tests

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13. Development of reading skills for English "Business News" through computer assisted instruction (CAI) for M.5 students (Uthaiwan Chaimongkol, 2000)	-An experiment by using the computer assisted instruction (CAI) through the authentic materials -Reading lessons of business news -Pre- and post tests
14. The effect of previewing on M.5 Students' English reading comprehension (Sireeya Paserakang, 2001)	-An experiment by using a preview technique -Lesson plans of reading by previewing -Pre- and post-tests
15. Using the project work approach to develop M.4 Students' systematic learning (Chulawan Kaewduangdee, 2000)	-An experiment by using the teaching method of project work -Implementing plans, self-assessment on systematic learning, the steps of project work assessment, group's activity record, and the end product assessment
16. Are there any significant differences in the attitudes of children when they are heterogeneously or homogeneously grouped for reading instruction? Middle school, grade 6. (Anderson, Gail and Skuhra, Linda, 1992)	-An experiment by grouping, literacy, reading -Interviews, student journals, and surveys
Titles / Researchers	Process/Instruments
17. Journal writing and middle school students (Tierney, Margaret, M., 1992)	-An exploration classroom ability -Motivation, writing -Interview, observation, students work
18. Clues to foreign language learning for middle school (Verhelst, Suzy, 1996)	-An experiment by using curriculum integration, learning styles and motivation -Observation and others
19. Using SQ3R method with fourth grade ESOL students (Hedberg, K 2002)	-An experiment by using reading strategy of SQ3R -Reading texts, pre- and post-tests

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Trainee’s Self-evaluation

Directions: After studying the section of the innovation development of the LCR, the trainee will self-evaluate the lesson learned, so question yourself and write in brief to check your understanding. If you are still in doubt, return to the lessons learned.

- 1) Definition, characteristics and attributes of innovation in the LCR

- 2) Categories of innovations

- 3) The role and development of instructional innovations

- 4) Give any examples you are interested in.

<p>1. Which statement is <u>not</u> the definition of innovation in ELT??</p> <p>A. Proposals for qualitative change in pedagogical materials. B. Proposals for qualitative change in pedagogical approaches. C. Proposals for qualitative change in pedagogical values. D. Proposals for qualitative approaches or values of individuals.</p>
<p>2. Which is <u>not</u> one of the factors of innovation characteristics in the SLA?</p> <p>A. The sociocultural context of the innovation. B. The personality and skills of individual teachers. C. The use of materials and approaches for teachers. D. The method of implication of research or problem solving.</p>
<p>3. The following are the principal attributes of the ELT innovation <u>except</u></p> <p>A. Teacher's initial dissatisfaction. B. Printed and non-printed materials. C. Feasibility for teacher's work. D. Acceptability for teacher's teaching style.</p>
<p>4. What is the innovation based on instruction and teacher talk?</p> <p>A. Authentic and created materials. B. The innovation depended on learning styles. C. The innovation based on learners' motivation. D. Self-access learning through teacher's support.</p>
<p>5. Which of the following is the teaching and learning process innovation?</p> <p>A. Printed and non-printed materials. B. Authentic and created materials. C. The cooperative learning model. D. Content-based instruction and curriculum.</p>
<p>6. What is the first step of the innovation development?</p> <p>A. Framing the learning process. B. Developing learning objectives. C. Developing innovative models. D. Trialing the innovative models.</p>
<p>7. What is the most important step before the innovations are used?</p> <p>A. Framing the learning process. B. Developing innovative models. C. Trialing the innovative models. D. Assessing the efficiency of innovations.</p>
<p>8. What aspect <u>can be derived</u> from framing the efficiency criterion?</p> <p>A. Continual behavior and final behavior. B. Continual behavior and process behavior. C. Process behavior and learning behavior. D. Behavior before learning and process behavior.</p>

9. Which is not an innovation development for classroom experiments?

- A. A construction of a supplementary book for reading short stories.
- B. Improving reading skills by a short folk tale.
- C. The study of M.2 students' English learning styles.
- D. Improving writing skills by using an error analysis of peer correction.

**Self-development for Remedial Training Model: Module 4 Innovation
Process in English Language Classroom Research**

Directions: *This section aims to show the answers from the post-test for the trainees to check. If you get the incorrect answers, revise the content of the LCR before you study the next modules: Follow the suggestion in each item.*

Item 1: The correct answer is D.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 4.1, and then answer the question again.

- The definition of the innovation development is that

Item 2: The correct answer is C.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 4.1, and then answer the question again.

- The factors of innovation characteristics in SLA include.....

Item 3: The correct answer is B.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 4.1.2, and then answer the question again.

-The principal attributes of the ELT innovation include.....

Item 4: The correct answer is A.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 4.2, and then answer the question again.

-The innovation based on instruction and teacher talk consists of

Item 5: The correct answer is C.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 4.2.1(2), then answer the question again.

-The innovation based on teaching and learning process comprises.....

Item 6: The correct answer is B.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 4.3.2, and then answer the question again.

-The first step of innovation development is that

.....

Item 7: The correct answer is D.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 4.3.2 (2), and then answer the question again.

-The most important step before the innovations are used is

.....

Item 8: The correct answer is A.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 4.3.2 (2), and then answer the question again.

-The aspect that can be derived from framing the efficiency criterion is

.....

Item 9. The correct answer is C. Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 4.3.2 (2), and then answer the question again.

-The innovation development for classroom experiment can be

.....

**If you have studied and revised your in correct answers,
please continue in the next module**

Structure of the ELCR Model: Module 5 Designing an English Language Classroom Research

Contents

- 1) Quantitative research: experimental designs in ELCR
 - 1.1 Definition
 - 1.2 Major components of experimental research
 - 1.3 Single group designs
 - 1.4 Quasi-experimental designs
- 2) Qualitative research in L2 classroom research
 - 2.1) Definition and major characteristics
 - 2.2) Why do we need to do qualitative research?
 - 2.3) Conducting a qualitative research in L2 classrooms?

Background Concepts

1) The research design of quantitative research in terms of the experimental design in L2 learning and teaching is the process of planning and organizing the elements or components that comprise the research study to control and manipulate some intravenous variables.

2) The experimental designs in practices of English language classroom research cover single group designs and quasi-experimental designs.

3) The qualitative research in L2 learning and teaching involves an interpretive naturalistic approach. The researcher studies things in their natural settings, attempting to make sense of or interpret phenomena in terms of aspects or contexts of second language acquisition.

4) The qualitative research designs include heuristic or hypothesis-generating research, and deductive or hypothesis-testing research. This type is useful for discovering or describing L2 acquisition in its natural state or context. However, its limitation is only to describe observable L2 acquisition behavior rather than attempt to describe actual language processing.

Objectives

After studying the content in Module 5, trainees could be able to:

- 1) explain the definition and the use of research designs in English language classroom research,
- 2) indicate the designs of experimental research in English language classroom research, and
- 3) explain how to conduct the qualitative research used in L2 acquisition.

Training Activities

- 1) **Pre-training stage**, trainees
 - 1.1) do the pre-test on designing experimental designs and qualitative research in L2 classroom research, and
 - 1.2) check the survey of trainees' opinions of the lesson learned.
- 2) **Developmental stage**, trainees
 - 2.1) learn through the handouts of the research designs,
 - 2.2) discuss about what trainees have learned among trainee groups and the trainer.
- 3) **Application**, trainees
 - 3.1) self-evaluate the content of the research designs, and
 - 3.2) revise the content of the research designs.

Evaluation

- 1) Trainees do the post-test and feedback
- 2) If trainees do the test incorrectly, they have to revise their answers.

5

Designing an English Language Classroom Research

5.1 Quantitative research: experimental designs in the E LCR

5.1.1 Definition

Seliger and Shohamy (1989) state in the second language research methods that designing research may be described as the process of planning and organizing the elements or components that comprise the research study. Experimental research is carefully constructed so that variables can be controlled and manipulated.

5.1.2) Major components of experimental research

All experimental approaches involve the control or manipulation of the three basic components of the experiment: *the population, the treatment, and the measurement of the treatment*. The components concerned are as follows:

1) *The type and number of groups*

Experimental research is concerned with studying the effects of specified and controlled treatments given to subjects usually formed into groups. Groups can be formed especially for the purposes of the experiment or they can be 'natural' in the sense that they already exist prior to the research.

2) *The treatment*

This refers to anything done to groups in order to measure its effect. The treatment is not a random experience which the groups might have, but *controlled and intentional*, such as, exposure to a language teaching method specially

constructed for the experiment, or materials presented under controlled circumstances, that is to say, in a language laboratory. Treatments are the *independent variable* in the research.

3) *Measurement or observation*

Measurement or observation refers to how the effects of the treatment will be evaluated or observed. The effects of a treatment might be evaluated by means of a language test, a judgment, or a communicative task; or physical measurements, such as response time, can be measured electronically, or spectrograms can be taken.

Using conventions established by Campbell and Stanley (1963), the components of experimental research design will be symbolized as follows:

X = an experimental treatment such as a teaching method, or exposure to specially constructed materials, and so on.

O = observation or measurement of the effects of the treatment.

R = randomization, or the random assignment of subjects to groups in order to control for extraneous variables.

The experimental research design consists primarily of various ways of organizing a treatment (X) and an observation or measurement (O) depending on the conditions under which the research is being conducted. They include *1) single group designs*, in which research might be conducted on only one group, *2) control group designs*, in which one group receives a treatment while the other, does not receive a treatment *3) factorial designs*, which allow for the investigation of a number of independent variables at the same time; and *4) quasi-experimental designs*, in which experimental research is conducted in situations which cannot be completely controlled or manipulated.

In case of the real condition of the classroom setting, there is only one sample group. Therefore, the research design is limited in *single group designs* and *quasi-experimental designs*. The details are discussed as follows:

5.1.3) Single group designs

1) *One-shot design: X O (Pilot study design)*

This is an experimental research design at its most basic. In this design, a single treatment is given to a single group or individual. The group or individual is then observed, tested, or measured. This design might also be referred to as the 'pilot study' design because it does not control any extraneous variables. There are not enough subjects for randomization into groups or it may be impossible to find out what the pre-treatment conditions are.

Advantage: *The design is useful* as a means of pinpointing what to avoid in experimental research. It can also be used for preliminary testing of instruments.

Disadvantage: *The main problem with this design* is that there is no way of knowing the characteristics of the group or individual before the treatment or experience.

Example

A second language teacher employs a new method for teaching the communicative use of the target language. After three weeks of using this new method, a test is administered to the class. The class performs well on the test.

2) *One group pre-test + post-test: O1 X O2*

This design attempts to use the subjects as their own controls and to eliminate the need for a control group design. This design is sometimes referred to as a 'repeated measures' design because the subjects are observed or measured twice on the dependent variable.

Advantages: It controls a number of extraneous variables which can affect the homogeneity of subjects when more than one group is involved. To some degree, the design also controls for attrition or loss of subjects. Since the same group is used for both pre- and post-tests, it does not need to be matched to another group.

Disadvantages: One problem is that there is no certainty that the possible differences that appear in O2 are the result of treatment X; they might simply be changes that would have taken place anyway. For example, in classroom research where the independent variable might be a set of materials or a language teaching method, there is no way of knowing whether changes between the before and after treatment measures (O1 and O2) are the results of incidental exposure to language materials or to some other experiences that the subjects may have had.

Another possible disadvantage of this design is that the pre-test, O1, may sensitize the subjects to specific aspects of the treatment, X, and thus confound what is measured by the post-test, O2.

Example:

In a study on the effects of L2 instruction, the researcher wishes to establish that the group has no knowledge of a grammatical structure which will be taught in the lesson (X). In order to establish this, two tests are constructed which specially test for the target structure in a discrete point test. One test will be used as the pre-test and the other will become the post-test.

3) *Time-sampling designs: O1, O2, O3, On...X, On + 1, On + 2*

These are also referred to as 'time-series' designs because a number of samples or observations are taken over a period of time. They can be distinguished from non-experimental longitudinal research because they have a controlled treatment, X, inserted after a number of observations or measurements. The use of this type of design is another way of overcoming the problems inherent in the previous designs.

Advantage: Collecting data over an extended period before and after the treatment allows us to establish a normal pattern of performance for the language acquisition behavior under investigation.

Disadvantage: This allows the researcher to exclude the possible interaction of incidental exposure to language material outside the classroom, or any natural developmental change which may take place regardless of instruction.

Example

A study wishes to investigate the effectiveness of teaching students the use of relative clauses in English. For the purpose of the research, a 'treatment' is constructed consisting of a lesson which gives the formal features of relative clauses in speech and writing. The treatment is preceded by several in-class writing assignments, (O1, O2, O3) spaced over several weeks. For each writing assignment, the number of relative clauses in learners' writing is tallied and categorized. After the treatment, several similar writing assignments are given (On+1, On+2, On+3) and the number of relative clauses are counted and categorized.

5.1.4) Quasi-experimental designs

Quasi-experimental designs (Campbell and Stanley, 1963) are constructed from situations which already exist in the real world, and are probably more representative of the conditions found in educational contexts. Some of the designs described above have also been termed 'quasi-experimental' because the research is conducted under conditions in which it is difficult to control many of the variables, and in which subjects cannot be assigned to special groups for the purposes of the research. One design is presented as follows:



This design is useful for those situations in which the researcher has access to only one group of subjects at a time.

Example:

As in the previous example, the aim of the study is to measure the effects of language laboratory training on the pronunciation of advanced level learners. However, the program has only one advanced level class entering every three weeks.

In order to gather enough subjects for a study, it will be necessary to pool the results of at least three classes. This can be accomplished by repeating the one-group pre-test/post-test design discussed above, but treating the separate groups as one group in a time-series design. In a sense, we are replicating the same experience each time with a different class, the population characteristics of which are assumed to be the same.

Group 1: (Week 1) O1 X O2
Group 2: (Week 3) O3 X O4
Group 3: (Week 6) O5 X O6

Advantages: 1) It allows for a larger population to be treated, and overcomes the problem of lack of access to large enough groups of subjects at any one time. 2) This design could be continued further to include several groups and would be useful for investigating variables over long periods of time. 3) It also allows us to use the pre-test which could control some extraneous variables by using the statistical technique.

Disadvantage: Another possible source of internal invalidity is the sensitizing effect of the pre-tests. The experimenters need to use pre-tests which will enable them to claim that the groups are similar at the outset of the research and yet not sensitize the groups to the material treatment.

Summary: The designs presented in this section should be used as examples of possible experimental or quasi-experimental designs for L2 language classroom research. Possible actual conducts in classroom settings can be based on the components of experimental research (subjects, treatment, and measurement of the effects of the treatment) as well as the factors which affect the validity of experimental research.

5.2) Qualitative research in the second language classrooms

In this part of the module, it will discuss the research approaches which attempt to describe second language phenomena as they occur naturally as qualitative method will be discussed.

5.2.1) Definition and major characteristics

1) Definition: Qualitative research in language teaching is multi-method in focus, involving an interpretive naturalistic approach to second language acquisition. This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of aspects or contexts of second language.

Qualitative research involves the use and collection of a variety of empirical materials—case study, personal experience, introspects, life story, interview, and observational, historical, interact ional, and visual texts. These materials describe routine and problematic moments and meaning in individuals' lives. (Denzin and Yvonva, 1994:2).

2) Major characteristics:

- 2.1) Doing research in the natural setting,
- 2.2) A researcher as the key instrument of data collection,
- 2.3) Data collected as words or pictures,
- 2.4) The outcome as the process rather than the product,

- 2.5) The analysis of data inductively, pay attention on particulars,
- 2.6) Focusing on participants' perspective, their meaning, and
- 2.7) The use of expressive language and persuasion by reason (Creswell, 1998:16).

5.2.2) Why do we need to do qualitative research?

Normally, we decide to use the qualitative methods when:

- 3.1) we can commit ourselves to extensive time in the field.
- 3.2) we are prepared to engage in the complex, time-consuming process of data analysis—the ambitious task of sorting through large amounts of data and reducing them to a few themes or categories.
- 3.3) we are comfortable to write long passages, because the evidence must substantiate claims and the writer needs to show multiple perspectives.
- 3.4) we love to participate in a form of social and human science research that does not have firm guidelines or specific procedures and is evolving and changing constantly.
- 3.5) we need an empirical approach/data.
- 3.6) we need to remain open to elements that cannot be codified at the time of the study.
- 3.7) we have a concern for grounding the phenomena observed in the field (Baszanger and Dodier, 1997:8-11).

5.2.3) Conducting a qualitative inquiry in L2 classrooms

This parameter is concerned with the objective or the purpose of the research.

Research may have as a *heuristic* objective, the *discovery* or *description* of the patterns or relationships yet to be identified in some aspect(s) of second language (Seliger and Shohamy, 1989: 29-32).

1) Heuristic or hypothesis-generating research

If the aim of the research is heuristic, the investigator observes and records some aspect or content of the second language. There may be no complete theories or models to guide the researcher or to stimulate specific research questions at this point. Data are collected in an attempt to include as much of the contextual information as possible. These data may then be categorized or analyzed or written up descriptively. Often the results of such research may be the formulations of hypotheses.

Example:

A study is interested in finding out why some second language learners are more successful than others. It is decided to observe language learners in classroom environments and to record as much information as possible about the learning process in that context. The aim is to observe as many factors as possible which might be related to successful L2 acquisition (learners raising hands to participate, writing in notebooks, talking to themselves and to their peers, etc.).

In the process of analyzing the data, we may find ourselves with lists of a great many observed behaviors. We may then decide to look at all of the different behaviors and try to categorize them into patterns which seem to emerge from what has been observed. Because the aim of the research is heuristic (its inductive nature), an effort is made to avoid preconceptions about what good language learners do. We proceed from the data, the actual behavior or unprocessed observations, to patterns which are suggested by the data themselves.

2) Deductive or hypothesis-testing research

In this type of research, the investigator may begin with hypotheses which are based on observations suggested by heuristic research, or hypotheses found in L2 acquisition theory or in the areas which appear to have relevance to the second language. The *deductive* approach, (as different from the heuristic approach), begins with a question or a theory which narrows the focus of the research and allows the L2 phenomenon to be investigated systematically.

Example:

In cognitive psychology, the constructs or notions of ‘field independence’ and ‘field dependence’ are developed. This theoretical construct claims that some subjects are able to perceive a geometric figure embedded in a background pattern while others cannot. That is, subjects can be categorized as either dependent on the field or background upon which the pattern appears (‘field dependent’) or independent of the field or background (‘field independent’). This construct is thought to apply generally as a characteristic of learning style.

The first step to notice in this example is that we begin with how to categorize learners. We begin with an assumption or hypothesis that this categorization may apply to L2 learning as well. If we apply this concept to L2 learning, we may hypothesize that good language learners may be ‘field independent’, allowing them to extract language rules from the language data in which the rules are embedded. Poor language learners are ‘field dependent’, which would explain their difficulty in learning a language from natural language data. The concept of field dependent can thus become the source of hypotheses about second language acquisition. Both types are summarized in Figure 5.1.

Heuristic	Deductive
Data-driven driven	Hypothesis-driven
No preconceptions	Makes predictions
Can generate hypotheses	Tests hypotheses
Product: description or hypotheses	Product: theory

Figure 5.1: Characteristics of heuristic and deductive research

Figure 5.1 summarizes the end points and differences discussed above between the heuristic and deductive research objectives. Between each of these end points there are possible research formats which may combine attributes from both sides. The type of question asked in the research will determine what the objective or purpose of the research will be.

3) Procedures for conducting qualitative research

The procedures for conducting qualitative research are open-ended and dictated by the context of the particular research study. For this reason, there are general guidelines as follows:

3.1) Define the phenomenon to be described

Since qualitative research is synthetic in its approach, at some stage the focus of observation will have to be narrowed down to focus and try to open anything that is happening. For example, if the research is being conducted in a language class, the researcher will want to decide how to narrow the scope of the observations to be conducted or what possible subsets of the behavioral unit or the language class focused on.

3.2) Use qualitative methods to gather data

Qualitative research utilizes a variety of means to collect data. Often, several different methods are used in the same study in order to compile a more complete picture of the activity or event being described. Different means of collecting data, such as observations, tapes, questionnaires, interviews, case histories, field notes, and so on, can provide insights not available through research methodologies dependent on a single approach such as an experiment or a test. The use of a variety of methods of data collection also facilitates validation and triangulation

3.3) Look for patterns in data

Data which are gathered in qualitative research are raw data. Once the data are collected, the researcher must sift through to find recurring patterns emerging from them.

For example, in a study of turn-taking in the language class, the first stage might consist of video taping lessons. The tapes would then be viewed to discover only what kinds of turn-taking patterns emerged. Are certain request forms more frequent than others? Does the researcher in the language class request information in ways different from those used outside? How do learners request information or clarification? On the basis of the patterns which emerge, the researcher begins to formulate hypotheses and even develop models to explain the findings.

3.4) Validate initial conclusion by returning to the data or collecting more data

Once patterns have been identified in the data, the qualitative researcher will want to validate the findings. The use of a variety of methods to collect data allows the researcher to validate findings through *triangulation*. In *triangulation*, the same pattern or example of behavior is sought in different sources. The use of the process increases the reliability of the conclusions reached.

3.5) Recycle through the process or the data

This process has been described above as a ‘funnel’, in which the focus of the study becomes gradually narrowed. The researcher recycles through the data or

through the data collection process as questions about the phenomenon being studied come into the sharper focus.

For example, in the study on turn-taking, it may be discovered from the data that male language learners are more dependent on teacher elicitation. It may then be decided either to re-examine the data or to collect additional data using similar but more focused methods. Table 5.1 summarizes the process of conducting qualitative research (Selinger and Shohamy, 1989: 121-124).

-
-
1. Define the phenomenon of the second language to be described.
 2. Use qualitative methods to gather data.
 3. Look for patterns in the data.
 4. Validate initial conclusions by returning to the data or collecting more data.
 5. If necessary, return to step 1 and repeat the cycle, redefining the area of focus on the basis of the first cycle.
-
-

Table 5.1: Conducting qualitative research

4) The uses of qualitative research

4.1) Qualitative research is a useful approach wherever an investigator is concerned with discovering or describing L2 acquisition in its natural state or context and where there are no assumptions about what the activity consists of or what its role is in acquisition.

4.2) Any conclusions reached in this kind of research are arrived at as a result of considering only the data and the possible patterns which can be inferred *inductively* from the data.

4.3) Qualitative research may be said to be *hypothesis-generating* because questions are suggested by these recurring patterns which emerge from the data itself.

5) The problems of non-participants observation in L2 acquisition

5.1) Conducting qualitative research in second language acquisition presents unique problems to the investigator. The language itself may become a variable.

5.2) Research of this type has been limited in L2 acquisition, because it is to describe observable L2 acquisition behavior rather than attempting to describe actual language processing, which is by definition internal.

5.3) Qualitative research appears to be more appropriate for describing the social context of second language, such as dynamic speech interactions (who says *what* to *whom* and *when*), frequencies and descriptions of speech acts in given language-use contexts such as the language classroom, and descriptions of the teacher and learner language in the language classroom.

In conclusion, English language classroom research could be conducted in actual contexts by both quantitative research in terms of experimental design and qualitative research, in which the problems occurring in the classroom settings are explored. The teacher researcher could design the classroom research by integrating these two types of research in order to increase valid and reliable classroom research results.

The next module of English language classroom research intends to discuss the data collection in both quantitative and qualitative research.

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Trainee's Self-evaluation

Directions: After studying the section of the research design of the ELCR, the trainee ill self-evaluate about the lesson learned. Question yourself and write in brief to check your understanding. If you are still in doubt, return to the lessons learned.

1) Quantitative research: experimental designs--definition

.....

2) Major components of experimental designs in L2 classroom research

.....

3) Characteristics of single group designs and quasi-experimental designs

.....

4) Qualitative research: definition and designs

.....

5) Conducting qualitative research in L2 acquisition

.....

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.....

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.....

Test of Self-evaluation:
Module 5 Designing an English Language Classroom Research

- A. It is easy to collect research data.
- B. It is to control dependent and independent variables.
- C. To organize and plan the experimental instruments.
- D. To reveal the exact results and control some variables.

2. Which one is not one of the components of experimental research?

- A. The type and number of groups.
- B. Heuristic or hypothesis-generating.
- C. The treatment.
- D. Measurement or observation.

3. Which experimental design is usually conducted in classroom research?

- A. X O
- B. O1, O2, O3, On...X, On + 1, On + 2
- C. O1 X O2
- D. Group 1: O1 X O2 Group 2: O3 X O4 Group 3: O5 X O6

4. What is the purpose of qualitative research in L2 classrooms?

- A. To study and interpret phenomena in natural contexts.
- B. To study and make up some theories.
- C. To study the effect of independent variables.
- D. To study the theories of dependent and independent variables.

5. Which is not true about major characteristics of qualitative research??

- A. Do in natural settings.
- B. Researcher as a key instrument of data collection.
- C. Data analyzed by statistical techniques.
- D. Data collected as words or pictures.

6. Which is true about heuristic or hypothesis-generating research?

- A. Beginning with hypotheses based on observations.
- B. Observing and recording some aspects of L2 acquisition.
- C. Ending with some assumptions and research questions.
- D. Synthesize different results into the harmonious contents.

7. Which is the first step of the procedures for conducting qualitative research?

- A. Define the phenomenon to be described.
- B. Use observations, tapes, questionnaires or interviews.
- C. Look for patterns in data.
- D. Recycle through the process of data.

8. What is the limitation of qualitative research in L2 acquisition?

- A. It can not be conducted together with the quantitative research.
- B. It can help make up some new theories.
- C. It is appropriate for describing the social context.
- D. It is only to describe observable L2 acquisition behavior.

Self-development for Remedial Training Model

Module 5: Designing an English Language Classroom Research

to check. If you get the incorrect answers, revise the content of the design of the ELCR before you study the next module: Follow the suggestion in each item.

Item 1: The correct answer is D.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 5.1, and then answer the question again.

- The “main purpose of research designs” is
that
...
.....

Item 2: The correct answer is B.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 5.1.2, and then answer the question again.

- The major components of experimental research
include.....
.....
...

Item 3: The correct answer is C.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 5.1.3, and then answer the question again.

-The experimental design usually conducted in classroom research
is
.

Item 4: The correct answer is A.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 5.2, and then answer the question again.

-The purpose of the qualitative research in L2 classrooms is that

.....

.....

Item 5: The correct answer is C.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 5.2.1, and then answer the question again.

-The major characteristics of qualitative research include.....

.....

.....

Item 6: The correct answer is B.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 5.2.3, and then answer the question again.

-Conducting heuristic or hypothesis-generating research is to

.....

.....

Item 7: The correct answer is A.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 5.2.3, and then answer the question again.

-The first step to do the qualitative research is that

.....

.....

.....

Item 8: The correct answer is D.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section No.5 of 5.2.3, and then answer the question again.

-The limitation of doing qualitative research includes

.....

.....

.....

**If you have studied and revised your incorrect answers, please
continue to in the next module.**

Structure of ELCR Model Module 6: Collecting Data through English Language Classroom Research

Contents

- 1) Determining what constitutes data.
- 2) Procedures for collecting the data in quantitative research.
- 3) Description of data collection procedures.
- 4) Procedures of data collection in qualitative and quantitative researches typical use in L2 classroom research, including:
 - 4.1) Interviews
 - 4.2) Record reviews
 - 4.3) Diaries
 - 4.4) Observations
 - 4.5) Verbal reporting
 - 4.6) Questionnaires
 - 4.7) Tests
- 5) Issues and problems in collecting language data.
- 6) Assuring the quality of the data and the data collection procedures;
 - 6.1) Reliability
 - 6.2) Validity

Background Concepts

- 1) Determining what constitutes data may cover different kinds of phenomena, such as the learners' utterances, conversations, learning strategies, attitudes toward learning a language and performances of learners on metalinguistics. This type of determining includes variable definition, operationalizing the variables and behaviors, and the assessment of such behaviors.
- 2) Procedures to collect data include choosing which data to collect, deciding how to collect data, and selecting appropriate data collection procedures.
- 3) Data collection in L2 acquisition covers the procedures of a low degree of explicitness (more typical of the heuristic/synthetic type of research) and those of a high degree of explicitness (more typical of analytic/deductive type of research).
- 4) In most of qualitative studies, the procedures of data collection consist of interviews, record reviews, diaries, observations, verbal reporting, and/or questionnaires. While, quantitative research data include questionnaires, and a variety of tests.
- 5) With issues and problems in regards to language data collection, tests or questionnaires are associated with reliability and validity, defining variables to be

measured, language competence and performance. Interlanguage data consist of systematic and non-systematic elements depending on whether the learners participate in either a planned or an unplanned discourse.

6) The quality of the data and the data collection procedures are composed of reliability and validity. Reliability provides information on whether the data collection procedure is consistent and accurate. Different types of reliability include inter-rater, test-retest, regrouping, split-half, item statistics, and co-efficient of internal consistency. Validity refers to the extent to which the data collection procedure measures what it intends to measure. This contains the validity of content, criterion, construct and item analysis.

Objectives

After studying the content in Module 6, trainees could be able to:

- 1) Determine what constitutes data in the second language research,
- 2) point out the procedures for collecting the data in quantitative research,
- 3) brief the description of data collection procedures,
- 4) select the data collection procedures to suit the research methods,
- 5) exemplify issues and problems in collecting language data, and
- 6) indicate how to assure the quality of the data and the data collection procedures.

Training Activities

- 1) **Pre-training stage**, trainees
 - 1.1) Do the pre-test on the data collection of the English language classroom research.
 - 1.2) Check the survey of trainees' opinions on the lessons learnt.
- 2) **Developmental stage**, trainees will:
 - 2.1) learn through the data collection handouts of the English language classroom research.
 - 2.2) discuss about what trainees have learnt among trainee groups and with the trainer.
- 3) **Application**, trainees will:
 - 3.1) self-evaluate the content of the data collection in the ELCR.
 - 3.2) revise the content on the data collection in the ELCR.

Evaluation

- 1) Trainees do the post-test and feedback.
- 2) If trainees do the test incorrectly, they have to return for revising the content.

6

Collecting Data through English Language Classroom Research

6.1 Determining what constitute data

constitutes data must be determined. The data may cover a wide variety of phenomena such as learners' utterances, conversations, strategies used for producing and solving language problems, attitudes toward learning a language and toward its speakers, language used by teachers and students in classroom lessons, and performances of learners on metalinguistic tasks, such as judgments, translations, imitations, and so on.

Determining what constitutes data involves a number of steps:

- 1) It is to arrive at a precise and clear definition of the variables which need to be investigated in a given research study.
- 2) This is done through operationalizing the variables by identifying a set of behaviors associated with them, and according to the theory.
- 3) The data collected through the assessment of those behaviors occur in a variety of forms, such as test scores, descriptions, conversations, answers to questionnaires, interviews, verbal descriptions, or observations of language behaviors in a classroom.

6.2 Procedures for collecting the data in quantitative research

To collect the data, the researcher has to decide: 1) *what* data to collect, 2) *how* to collect them, and 3) selecting appropriate data collection procedure(s) from available types, some procedures which are more suitable for certain types of data; however, similar types of data can often lend themselves to a variety of procedures.

Procedures for collecting the data should be taken into consideration for the instruments used as in the following aspects:

6.2.1) If the behavior selected, which indicates language proficiency, is 'ability to pronounce words accurately', the researcher needs to search for appropriate procedures to study that ability. If specific phonemes have been defined, the researcher may collect data through *a test* where the subject is required to pronounce these while being recorded in a language laboratory.

6.2.2) If the researcher wants to collect data in the form of the subject's pronunciation in a natural conversation, the subject's speech in that natural setting may be *observed* and recorded.

6.2.3) If learners are asked to assess their own proficiency, the researcher may use the *questionnaire*.

6.2.4) If the learners are asked to assess the proficiency of their peers, the researcher may use *interviews*.

6.2.5) Similarly, in the case of teacher effectiveness, data about the relationship between teachers and students can be collected through *interviews* (with

teachers and students), *questionnaires* (administered to both), or *observations* (of actual behaviors of students and teachers during class time).

6.2.6) Data about teacher's knowledge of the subject matter and of current teaching methods can be collected by means of a *test* and/or *observations* (of actual lessons).

6.2.7) It is possible, at times, to use *multiple procedures* in one study and thus to obtain data from a variety of sources at the same time.

6.3 Description of data collection procedures

This section describes a variety of procedures which the second language acquisition researcher can use to collect the data from classroom research. The procedures will be described according to the framework of the data collection. *Figure 6.1* lists the procedures which will be discussed in this section. *On the left hand side* those of a low degree of explicitness (more typical of the heuristic/synthetic type of research) are listed. But for, those of a higher degree of explicitness (more typical of the analytic/deductive type of research) are shown on the *right hand side* of the continuum. Some procedures are placed in between the two points, since they share features of both types of research.

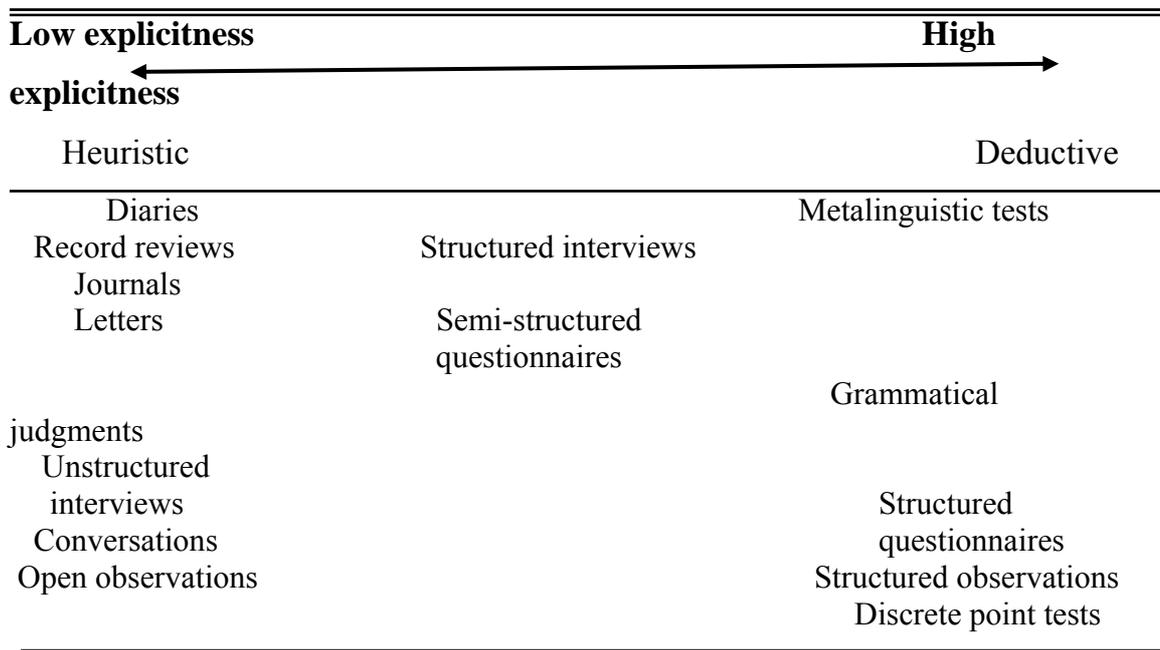


Figure 6.1: Examples of data collection procedures typical of research types

6.4 Procedures of data collection in qualitative and quantitative research typical use in L2 classroom research

In qualitative types of research (heuristic/synthetic), where a phenomenon is studied within a natural context, data are often collected by means of a number of procedures, with one piece of data leading to the next.

Example:

A researcher is interested in finding out how a number of immigrants acquire the language of the country where they reside. She ***interviews*** a number of learners and asks them to ***report*** on their experiences and to ***reflect*** on the processes that help them learn the language. She also ***observes*** the immigrants using the language as they interact with colleagues at work and with spouses and children at home. In addition, she ***reviews records*** which are believed to provide further sights about their language learning processes. These records include letters they write in the target language, notes and reports they write at work, as well as their grades and papers in the language classes in which they are enrolled during the time they are acquiring the language. She also ***reviews*** a diary of one of the learners which describes the process and problems of learning the language and some experiences he had as an immigrant in the first few months of arriving in the new country.

In the example above, the researcher uses a variety of data collection procedures for collecting data about the process of second language learning by immigrants. All these procedures may be considered to have a low degree of explicitness since the aspects and data to be collected are not specified beforehand. The researcher does not determine in advance the exact data that will be sought, and may even have only a rough idea of the procedures that will be used, since it is not known whether those data from a variety of sources the researcher often obtains rich and comprehensive data. Such data usually provide an expanded and global picture of the phenomenon, as each source provides additional data.

Some of the typical devices and procedures used for collecting data in this type of research are interviewing informants, compiling biodata about them, administering open questionnaires, eliciting ratings and rankings, and using various unobtrusive measures such as studying students notebooks, handouts given by the teachers and official documents. Most of these procedures are described more extensively in later sections of this chapter.

6.4.1) Interviews

The purpose of the interview is to obtain information by actually talking to the subject. The interviewer asks questions and the subject responds *either in a face-to-face situation or by telephone*. Interviews are personalized and therefore permit a level of in-depth information-gathering, free response, and flexibility that cannot be obtained by other procedures. *In case of disadvantages*; however, interviews can be costly, time consuming, and often difficult to administer. They depend on good interviewing skills that might require extensive training.

In L2 acquisition research, interviews are used to collect data on cover variables, such as attitudes (toward the target language, or the ethnic group whose language is being learned) and motivation for learning the second language. They can be used as tests for obtaining information about learners' language proficiency.

Interviews can be differentiated by their degree of explicitness and structure, ranging from very open interviews to very structured ones. The types of interviews are:

1) Open interview

Open interviews provide the interviewee with freedom of expression and elaboration and often resemble informal talks. They allow greater depth, and one question leads to another without a pre-planned agenda of what will be asked. This type of interview is therefore used mostly in qualitative and descriptive studies.

2) Semi-open interview

In 'semi-open interviews there are specific core questions determined in advance from which the interviewer branches off to explore in-depth information, probing according to the way the interview proceeds, and allowing elaboration, within limits.

3) Semi-structured interview

The semi-structured interview consists of specific and defined questions determined beforehand, but at the same time it allows some elaboration in the questions and answers.

4) Structured interview

The structured interview consists of questions defined from the start and presented to the interviewee. No elaboration is allowed in either the questions or the answers. This type of interview is usually employed when uniform and specific information is needed and when it is necessary to interview a large number of subjects.

Below are a number of examples of questions used in interviews of different degrees of explicitness.

Examples

- a) Which of the following best describes your level of proficiency in the second language?
1. a new immigrant
 2. native
 3. residence of 10 years or more
 4. residence of less than 10 years
- b) *While reading a second language text and encountering an unknown word, do you:*
1. *turn to a dictionary? yes/no*
 2. *ask the teacher for its meaning? yes/no*
 3. *not worry about it and just go on? yes/no*
- c) What do you think of the people whose language you are now learning?
(This open question can be followed by probes as to the reasons the subject feels that way: Where do these feelings originate? How are they expressed in the classroom situation? Do these feelings transfer to the learning of the language?)
- d) *What do you encounter a word you do not know?*
(This can be followed by questions such as: *Why? Where? How come?* It can also be followed by tasks such as: *Let's read a text together, and show me how you do these things. Do you do it with all types of texts? How often does it occur?*
- e) Please describe orally what do you do when you are presented with this text and need to comprehend its contents.

(This can also be done in a more structured way when the researcher provides the learners with a number of strategies that students usually use in a similar situation, and asks the interviewees whether they use them, as in the example below.)

f) When answering this test question, what did you do? 1) Did you refer back to the text? 2) Did you guess the answers? 3) Did you answer it based on your previous knowledge about the subject?

The nature of the interview will determine the type of data obtained. Specifically, more structured interviews will elicit brief and concise data in the form of *checks, marks, and short responses*, while open interviews will elicit generally more elaborated data in the form of *impressions, descriptions, and narratives obtained from interviews*.

Interviews are becoming very useful in L2 acquisition research. An important element in obtaining data is training of interviewers in effective interviewing strategies and techniques to increase the quality of data gained.

6.4.2) Record reviews

This, another commonly used procedure in qualitative research, involves collecting data from *documents and other materials*, the content of which is reviewed and analyzed by a process known as content analysis. *Examples* of such records and documents are records of meetings, report cards, letters, notebooks, historical records, documents, correspondence, tests, papers, and teachers' comments.

6.4.3) Diaries

Diaries have been used in a number of L2 acquisition studies, especially to collect data on subjects' experiences as students or as teachers of a second language, so the subjects, or the researcher record in writing becomes an aspect of a process or a phenomenon. The type of data obtained from the above procedures can take a variety of forms: *verbal descriptions* when the data are based on notes taken by the researcher, *tapes (audio or visual)*, or even simply 'impressions' or 'anecdotes' which the researcher carries away and may record later. Often data of this type need to be transformed so that they become more manageable. Transcription may, however, exclude information such as the speaker's accent, intonation, stress or other non-verbal elements which may be relevant to the understanding of the phenomenon under study.

6.4.4) Observations

Observations are very common in qualitative research, in which the researcher usually observes a number of behaviors taking place simultaneously, often without determining in advance the particular aspects that will be observed. The observation is performed either *by a participant observer*, who becomes an integral part of the observed situation as one of the subjects without the other participants being aware of the fact, *or by a non-participant observer* who records in detail as an outsider, all the behaviors which take place. This section will describe a variety of observation types ranging from low to high degrees of explicitness.

Observations are always considered a major data collection tool in qualitative research. More *structured types* of observations have been used for collecting data in *quantitative studies*. In *L2 acquisition research*, observations are most often used to collect data on how learners use language in a variety of settings, to study language learning and teaching processes in the classroom, and to study the behaviors of language teachers and students.

Uses and advantages of observations

1) Observations examine a phenomenon or a behavior while it is going on. They can be made in many situations. A researcher who collects observational data on code switching, for example, may observe how learners use language at home, at work, at school, or in the classroom.

2) The main advantage of using observations for collecting data is that they allow for the study of a phenomenon at close range with many of the contextual variables present. This is a feature which is very important in studying language behaviors, but without biases which may affect the researcher's objectivity.

3) Observations can be made by insiders who are part of the group observed, by the participant observers or by outsiders. They can focus on a single subject, on a number of subjects, or on a whole group (a whole class, for example). They can last one session, a number of sessions, or be made at intervals, such as every three seconds, for example.

4) Observations can also vary in their degree of explicitness. Those of a *high degree of explicitness* are '*structured*' observations, in which the researcher has determined in advance what to look for in the observed context. Those of a *low degree of explicitness* are '*unstructured*' or '*open*' observations, in which the data being recorded are broad and more general.

Observations can be made of the following forms:

Examples

A: Checklists

Observed behavior: Student's activities in the language classroom.

Task: Check whether or not the student performed the following:

<i>Learner's behaviors</i>	<i>Yes</i>	<i>No</i>
1. Asked for translation of unknown words		
2. Used L1 in conversation with teacher		
3. Used L2 in conversation with teacher		
4. Used L2 in conversations with peers.		
5. Referred to textbook/dictionary for unknown words		
6. Asked for grammatical explanations.		

B: Numerical scale

Observed behavior: Students' use of L2 in asking questions

Task: How often does each student ask a question in L2?

Code: 4 = always, 3 = usually, 2 = sometimes, 1 = never

<i>Students or names</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>1</i>
<i>Student 1 or name</i>				
<i>Student 2 or name</i>				

C: Rating scale**Observation behavior:** *Students' involvement in a specific classroom task***Task:** *Please mark how involved students are:*

Students	Very involved		-----	Not very involved	
	1	2	3	4	5
1.					
2.					

In other group observations (those of a low level of explicitness), observations are more open, and data gathered may vary during the course of observation as a reflection of the observer's developing understanding of what is being observed. These types of observations will require the observer to describe the observed scene in more general terms and in an impressionistic manner as in examples D, E, and F that follow:

D: Open observations (1)**Observed behavior:** *Students' involvement in language class.***Task:** *Describe the level of involvement of three students in the language class activities.*

.....

.....

.....

.....

E: Open observations (2)**Observed behavior:** *Teacher's and students' use of L1 in an L2 class.***Task:** *Describe the type and amount of language used by the teacher and by the students during a group work activity.*

.....

.....

.....

.....

F:*Follow two students during class time and during intermission (while they play in the school yard) and describe the type of language they use.*

.....

.....

.....

.....

Data obtained from more structured observations will be in the form of checks, tallies, frequencies, and ratings, while data obtained from the open observations will be in the form of impressions, field notes, tapes or transcripts.

Impressions often have no records, and this may create a problem if it is necessary to return to the data.

The use of observation as a data collection procedure has been gaining increased attention with the recent emphasis on classroom research. It is also suggested that a variety of observational procedures for different aspects of classroom research could be employed simultaneously, some being of the more structural types, such as interactional analysis, and the others of a more open nature. Each observational procedure addresses different aspects in the classroom, so each complements the other. Thus, together they provide a more comprehensive picture of what takes place in the language learning classroom or in other research settings under observation (Allwright, 1988).

6.4.5) Verbal reporting

The use of interviews as a data collection procedure in L2 acquisition research has been increased recently with the growing emphasis on collecting data about *linguistic and cognitive aspects* involved in processing language.

Definition: Verbal reporting refers to a set of data collection procedures in which research subjects report orally to the researcher on the processes they are engaged in while performing a cognitive or linguistic task (Cohen and Hosenfeld, 1981 and Mann, 1983). The assumption underlying the procedure is that learners can provide insightful information on how they learn and function in the second language.

There are a number of research studies which utilize a variety of verbal reporting procedures for various types of L2 learning problems. Three main techniques for eliciting verbal reports are as follows:

1) Thinking aloud

This technique involves externalizing the content of the mind while engaged in a particular task without inferring mental processes. In that method subjects are told to say aloud everything they think and everything that occurs to them while performing the task, no matter how trivial it may seem (Hayes and Flower, 1980).

2) Introspection

It requires the subjects to observe the working of their minds when involved in a particular task, and report on them as they occur.

3) Retrospection

Retrospection probes the subjects for information after the completion of the task. This requires the subjects to infer their own mental processes or strategies from their memory of the particular mental event under observation.

The '*think aloud*' procedure is believed to yield rich data, since it elicits information which is kept in short term memory and is thereby directly accessible for further processing and verbalization. The other methods cannot always be relied on to produce data stemming directly from the subject's actual experience or thought processes.

Suggestions on how to collect 'think aloud data' are as follows:

a) Prepare each of the subjects for the session, to acquaint the researcher, to explain the purpose of the study, and to illustrate the task they are about to engage in, and thus allow practice.

b) Subjects go through the task and are asked to verbalize their thoughts while doing so. They are encouraged to point out any difficulties they encounter in comprehending the text or questions and to express verbally any confusion or uncertainty they experience when reading. Subjects who feel they cannot verbalize the processes are not forced to do so.

c) Interview each of the subjects individually, usually in the L1, to record the interviews. Subjects are not given a time limit in which to complete the task and there is as little intervention on the part of the researcher as possible.

d) During the session the researcher occasionally notes down the subject's overt behavior.

e) The tapes are later transcribed and analyzed using the 'protocol analysis' procedure (which is described in the section of analyzing data).

6.4.6) Questionnaires

Questionnaires are *printed* forms for data collection, which include questions or statements to which the subject is expected to respond, often *anonymously*.

In L2 acquisition research, questionnaires are used mostly to collect data on phenomena which are not easily observed, such as attitudes, motivation, and self-concepts. They are also used to collect data on the processes involved in using language and to obtain background information about the research subjects, such as age, previous background in language learning, number of languages spoken, and years of studying the language.

Advantages:

Questionnaires have a number of advantages:

a) They are self-administered and can be given to large groups of subjects at the same time. They are therefore less expensive to administer than other procedures such as interviews.

b) When anonymity is assured, subjects tend to share information of a sensitive nature more easily.

c) Since the same questionnaire is given to all subjects, the data are more uniform and standard.

d) Since they are usually given to all subjects of the research at exactly the same time, the data are more accurate.

However, one of the main problems with questionnaires is the relatively low response rate, especially with mailed questionnaires. A low return rate may therefore influence the validity of the findings. Another problem with questionnaires is that they are not appropriate for subjects who cannot read and write. *This is especially relevant to research in second language, as subjects very often have problems reading and providing answers in L2. Thus, there is no assurance that the questions used in a questionnaire have been properly understood by the subjects and answered correctly.*

The type of data obtained from questionnaires will vary according to the degree of structure of the procedures used: *open questionnaires will elicit data of a more descriptive and open nature, such as essays or narratives. Structured questionnaires will elicit data in the form of checks, numbers, or rankings.*

In developing questionnaires, especially those of a low level of explicitness, there is a need to include a *number* of questions, since a single question is meaningless. Moreover, questionnaires will often include a number of *scales*. Each scale is capable of eliciting data on a certain aspect of the behavior which needs to be measured, and each scale includes a number of questions. Below are examples of different types of items or questions on questionnaires. Examples A, B and G are of *structured questions*; examples C, D, E, and F are *usually types of questions* and example H is of questions used for *obtaining background information* about the subjects.

Examples:

A (The Likert scale: Likert,1932) Data collected about attitude toward the study of a second language.

Instructions: Mark 'X' the extent to which you agree with each of the statements:

1. *In using the foreign language in conversation, I feel:*

	strongly disagree(1)	disagree(2)	agree(3)	strongly agree(4)
Hesitant	
Comfortable	
Confident	
Talkative	
Cooperative	

2. *Learning the grammar structures is:*

Difficult	.....	.....	.....
Challenging	.....	.....	.....
Boring	.....	.....	.....
Important	.....	.....	.....

3. *When meeting speakers of the language, I:*

	Always	Sometimes	Rarely	Never
Try to avoid conversation
Tend to switch to my native language
Ask questions for

B. Semantic differentials (measuring attitudes toward the language class).(Osgood, Suci, and Tannenbaum, 1975).

Instructions: Mark 'X' at the place that best reflects your attitudes:

Learning French is:

	Scale:	(-3)	(-2)	(-1)	(0)	(+1)	(+2)	(+3)	
Good		Bad
Worthless		Valuable
Strong		Weak
Unpleasant		Pleasant
Relaxed		Tensed

**Note: This example there is an even number of choices (4). This forces the subject to make a choice regarding the direction of the attitude. It is also possible to give an odd number of choices (3, 5, 7).*

C. Comment in a sentence or two on your feelings about studying the language.

D. What is the best aspect about your language class? (attitude toward the language)

E. What is the thing you like best about this language?

F. Describe your feeling when using the foreign language in conversation with native speakers.

G. Describe the steps you take when reading a text during a test. What are the steps you use when you read the same text in your own time?

H. Background information

1. Where do you live? _____
 2. Where were you from? _____
 3. What language do you speak at home? _____
 4. When? _____ With whom? _____ For how long? _____
 5. Do you wish you spoke more languages?
 6. What do you do after school to prove your language? (Check 'yes' or 'no')
- ____ read newspaper? Yes/No
- ____ talk on the phone to native speakers? Yes/No
- ____ watch TV? Yes/No
- ____ read books in the language? Yes/No

6.4.7) Tests

This section focuses on testing procedures which can be used to investigate knowledge of the second language. A test is a procedure used to collect data on subjects' ability or knowledge of certain disciplines. In L2 acquisition research, tests are generally used to collect data about the subject's ability and knowledge of L2 in difficult areas, such as, vocabulary, grammar, reading, metalinguistic awareness, and general proficiency.

Collecting valid data is a complex and controversial issue since it relates to the problem of: 'What does it mean to know a language?' Tests with a high level of explicitness employ a variety of structured techniques to elicit language data while tests of low explicitness collect/record/gather language which is produced *spontaneously*, often without the subjects being aware that their language is being assessed.

1) **Types of tests:**

1.1) High explicitness

For high explicitness tests, the researcher will use elicitation techniques in which subjects are required to answer predetermined questions, to select among a number of alternatives based on a given text, or to fill in blanks, for example. The tests will often yield more isolated and discrete types of language, such as short sentences, structure, or lexical items.

1.2) Low explicitness

The low explicitness tests will assess spontaneous language by the researcher observing subjects interacting with native speakers in social situations or by reviewing notes or letters which the subjects have written. The tests of this type will yield more holistic, descriptive, and integrative language data in the form of continuous discourse, protocols, essays, speeches, and conversations.

Below, some examples of testing techniques are used for collecting language data. Those of high explicitness will be indicated and those of low explicitness will be moved along respectively.

2) **Examples of tests**

2.1) Judgment test. This is an elicitation technique where the test-taker is presented with correct and incorrect language items and is expected to decide whether they are acceptable or not. This procedure is widely used to test the metalinguistic ability of learners. This ability is believed to indicate competence in the language. Judgment tests can also be used with full discourse.

2.2) Multiple choice. This technique requires the test-taker to select a correct answer from a number of alternatives, usually based on a text or other stimulus that precedes it. It is used to test reading, listening, grammar, vocabulary, and writing.

2.3) True/false. This procedure requires the test-taker to determine whether a statement is correct or incorrect. It is often based on a text or oral stimulus and is usually used for testing grammar, vocabulary, reading, listening, or metalinguistics, as in the judgment tests mentioned above.

2.4) Elicited imitation. The test-taker is presented with an oral or reading stimulus and is expected to repeat it, or read it aloud. It is used for testing pronunciation and comprehension.

2.5) Cloze. The subject is presented with a written (or oral text from which a number of words or letters, clauses, or sentences) have been deleted. The subject is expected to fill in the missing parts. It is used for testing reading, writing, and overall language proficiency.

2.6) Completions. The subject is presented with partial oral or written questions, and is expected to complete them orally or in writing. This procedure is used to test aspects such as reading strategies, writing, vocabulary, grammar, and so on.

2.7) Translation. In this technique the subject is presented with an oral or written stimulus and is expected to translate its verbatim into L1. It is used to assess aspects such as comprehension, written production, lexicon, grammar, transfer from L1 to L2, and so on.

2.8) Recalls. After reading or listening to a stimulus, the subjects are asked to write down or to report orally all that they can recall from the test, in L1 or in L2. It is a widely used tool for researching the process of reading and listening.

In addition to the above, other data collection procedures, *which do not really look like 'tests'*, are often used to collect similar types of language data. In using these techniques, *all of a low level of explicitness*, the subjects are less aware of the fact that their language is *being assessed and therefore concentrate more on the meaning than on the form*.

2.9) The oral interview: This is a technique used to collect data on the oral language of the subjects. In this procedure, oral language is assessed in an interview in which the subject talks to the interviewer on a variety of topics. Information about the subject's pronunciation, fluency, use of language functions, and various other features of oral language use can all be assessed through the procedure.

2.10) Role plays and simulations. These techniques allow the subject and tester to act out given roles, or imitate real life situations, which are effective procedures for collecting more natural language data, especially for collecting oral and written language data in research. Most subjects are able to participate effectively in role plays or simulations and thus produce more natural language samples. These can be used for the assessment of oral features such as the use of speech acts, vocabulary, and pronunciation. Other procedures can also be used in assessing these techniques. They are as follows:

2.10.1) Observational procedures. They are also to collect data about the subjects' use of language in a variety of real life situations without the subjects realizing that they are being assessed.

2.10.2) Reviewing documents. This type is yet another procedure by which the written language ability of the subjects is collected from various types of written documents, without an official test. The researcher may deduce facts about the subjects' writing ability from letters, notes to peers, homework, and so on.

2.11) Standardized tests. Researchers often use ready-made tests developed by different agencies. They are referred to as *standardized tests*. They are developed by experts and are therefore considered to be well constructed. Individual test items are analyzed and revised until they meet given standards of quality. In such tests, directions for administering, scoring, and interpreting the scores are carefully

specified. One characteristic of a standardized test is its *objectivity*. This means that the score a subject obtains does not differ with different scores. Another major characteristic is the existence of *reliability and validity* of information.

The standardized tests will be administered by testing agencies, as is the case with the TOEFL test (Test of English as a Foreign Language), which is administered and scored by the Educational Testing Service. In case of Thai education, NT (National Test of English subject) is one type of test for assessing Thai students in the Office of Basic Education Commission.

In this part of the module, different procedures are discussed for collecting data in L2 research including these needed in classroom research. The section describes specific procedures used in qualitative type research, and continues through descriptions of observations, interviews, questionnaires, and different types of tests.

It is important to note that in an actual research study, a researcher will often use a number of data collection procedures and will not rely on one procedure. This approach usually yields extensive, rich, and more valid types of data based on a variety of sources. The researchers will now look at the relationship between data collection procedures and the quality of the language data obtained by these procedures.

6.5 Issues and problems in collecting language data

Seliger and Shohamy (1989) suggest issues and problems as follows:

1) *Tests* are used to collect data about the feature of language. A number of problems arise; however, in the process of defining what are considered to be appropriate 'language' data, since language is known to be affected by a variety of contextual variables which may affect the *reliability and validity* of the data.

2) In order to determine what are considered data, *it is necessary first to define the variable or the feature that needs to be measured* and then to select behaviors which will be indicative of the variables. Such definitions are noted to depend on current the theory of a language. *Defining linguistic variables is clearly a complex and controversial issue* which has direct implications for what will be considered valid language data.

3) In defining language data, the theory concerning the difference between *competence* (what the learner knows) and *performance* (what the learner is able to do) must be considered as the below questions.

-Is all language performance by a second language learner indicative of underlying grammatical knowledge? In other words, is the distinction between competence and performance valid for L2 acquisition?

-If it is valid, how will this be reflected in the manner in which data are collected?

-What can be considered valid language data in terms of this distinction?

-How will the procedures used to collect those language data affect the data obtained?

4) Interlanguage data consist of systematic and non-systematic elements, which language users and learners do not process their knowledge of the language in the same way under all conditions, and their performance varies as a product of the

stylistic norm they are drawing on, which again depends on whether they are participating in planned or unplanned discourse (Tarone, 1981).

In L2 acquisition research this variability is manifested in the type of task which the learner performs in supplying the researcher with data. Tarone (1981) claims that L2 learners can be observed to make different use of their interlanguage systems in different tasks. Thus, performance in one set of circumstances does not guarantee an identical or even similar performance in different situations.

6.6 Assuring the quality of the data and the data collection procedures

Among a variety of procedures for collecting data, any data collection procedure by its use, is already creating some effect on the data. All data collection procedures, to different degrees, have some effect on the type of data that are elicited. An important point; however, is that the researcher will be aware of these effects in explaining the results obtained. Some of the techniques to assure the quality of the research and the quality of data collection procedures used in the research include *reliability and validity*. The details of each technique are as the following aspects:

6.6.1 Reliability

The criterion of reliability provides information on whether the data collection procedure is *consistent and accurate*. Inaccuracies and inconsistencies may arise for a number of different reasons. For example, researchers using observations to assess the type of language used in the classroom may suspect that inaccuracies will occur when no formal *observational tools* such as *checklists* are used. The reason to suspect this is that the observers may unintentionally impose their *own biases and impressions* on the observed situation. However, when the same observation is made with the aid of a formal tool, such as check list, which specifies what the observer should *focus on*, there is less reason to suspect inaccuracies.

Different types of reliability need to be computed, depending on where the researcher suspects that inaccuracies in the data collection procedure could occur. They are indicated as follows:

1) Inter-rater reliability

In using data collection procedures of low explicitness, this examines the extent to which different raters (in this case, observers) agree on the data collected from the observation. In the above example, *it is possible to estimate the amount of inaccuracy by having another observer judge the type of language used in that classroom*. Thus, there should be *at least one more observer who will also be independently observing the language out put in that classroom*. *If two observers agree on what they see, then the data collection procedures can be considered reliable*.

2) Test-retest reliability

This type of reliability is used when the researcher needs to examine whether the data collection procedure is *stable from one administration to another*. For example, when the researcher uses a test to measure reading comprehension, they assume that the *performance on the test does not change from one time to another* (providing, of course, that no 'learning' has occurred in between the two occasions). In order to examine how stable the data collection procedure is from one

administration to another, the researchers will use test-retest reliability, which will *indicate the extent to which the procedure is stable over time.*

3) Regrounding

Regrounding is another type of test-retest reliability, used with procedures of low explicitness. Here, the researcher goes back to the data a second time and compares the patterns obtained with the results obtained the first time.

When the researcher is using two versions of the same data collection procedure and wants to ensure that the two versions are really equal, and gather the same type of data, parallel form reliability will be used. This examines the extent to which two versions of the same data collection procedure (two versions of an attitude questionnaire) are really collecting the same data and are in fact parallel, by comparing the results of the two versions. This is especially important in experimental research using the pre-tests and post-tests.

4) Split-half reliability

Rosco (1975, 133-134) states one of the approaches to reliability most popular with the test constructor is the split-half technique. A single administration of the instrument is made, the test split into two halves which are scored separately, and a Pearson correlation coefficient between the two scores is calculated. Then, the Spearman-Brown formula is used to compensate for the fact that the reliability was estimated from only half of the length of the final form of the test.

5) Reliability based on item statistics

Rosco (1975, 134-135) also states on reliability based on item statistics that Kuder and Richardson developed their approaches to reliability based on *item statistics* in an attempt to overcome some of the deficiencies of split-half reliability. Their formulas split a test into as many parts as there are items in the test. Assumptions are made that all of the items *measure a single trait* and that each respondent attempts every item. This formula is called Kuder-Richardson formula 20 (KR 20).

6) Cronbach's alpha co-efficient

This reliability technique developed by Cronbach in 1951 is used by the *item variance* of the test or questionnaire, since the scores rated are different. Besides, the scores of each item may be over one score (2, 3, 4 or 5), then the variance value will be added and calculated underlying its formula.

As the above discussion, when the researcher is using a data collection procedure which consists of a number of independent items, such as questions in tests or questionnaires, the researcher needs to find out whether all the items elicit the same information. *For example, a researcher using a test intended to measure reading comprehension in the second language needs to find out whether all the items measure the same thing.* For that purpose the researcher will employ the procedure of *internal consistency* reliability to provide that information. If it is found that some of the items do not measure reading comprehension, those items are then revised or removed from the test. The researcher may determine by the reliability value of each item.

Reliability is expressed as a *coefficient ranging from 0.00 to 0.10*. The higher the coefficient, the more reliable the procedure is. Determining whether the reliability is *acceptable depends on what one would expect reliability to be at least .70 or .80*.

7) **Guidelines for reliability practice**

The main advantage of assessing the quality of the data collection procedure *before* the real data are collected, that is, in the pilot of the *try out* phase, is that it is still possible at that stage to change, revise, and modify the procedure on the basis of new information. There are a number of ways which a researcher can improve the reliability of the procedure.

7.1) One way which reliability can be increased is through *lengthening the data collection instrument by adding more items and questions*.

7.2) Another way is to *remove the items that cause the problem or revise them by rephrasing or changing them*. Yet another way to increase reliability is through extensive training. This procedure is especially relevant for interviews, observers, and for researchers who analyze open data obtained from procedures of a low level of explicitness.

7.3) Training can be directed toward aspects such as recording the data, asking questions, using rating scales, and taking notes efficiently.

An example for computing the reliability of procedures of a low explicitness is given in the next section 'Analyzing qualitative research data'.

6.6.2 Validity

Definition: Validity refers to the extent to which the data collection procedure measures what it intends to measure. For example, a procedure which is supposed to measure speaking proficiency in the second language will be considered valid only when it really measures L2 speaking proficiency.

There are different types of validity, all providing '*evidence*' for validity. Validity cannot really be *proven* but it is necessary to obtain *evidence* of validity.

1) **Content validity**

It needs to be accumulated in order to find out if the data collection procedure is a good representation of the content which needs to be measured. For example, a researcher is constructing a language test to find out whether the research subjects have learned the material they are supposed to learn during a school year. The content validity of that test will be examined by comparing the test content with the content of the material which the students are supposed to learn that year. Showing that it is a good representation of that material will provide evidence for its content.

One way to find out the content validity, as Rovinelli and Hambleton in Stanley and Hopkins (1972) present, is a way to construct the test by setting the behavioral objectives in that test. Then, it will be proved by experts to consider the *relevancy* of each item to the behavioral objective in the test. This way is called '*item objective congruence: IOC*'.

How to find out the content validity as discussed above is presented as follows:

1) Have at least three experts consider whether each test item is relevant to the given behavioral objective assigned by considering the score given:

+1 refers to *its relevancy* of the test item to the behavioral objective.
 0 refers to *uncertain relevancy* of the test item to the behavioral objective.
 -1 refers to its *irrelevancy* of the test item to the behavioral objective.

Example 6.1: The evaluation form to check the relevancy of content to behavioral objective.

Content of lessons	Behavioral objectives	Evaluation scores		
		+1	0	-1
Reading comprehension	-To be able to comprehend the main topic			

Example 6.2: The evaluation form to check the relevancy of behavioral objectives to the test items

Behavioral objective	Test items	Evaluation scores		
		+1	0	-1
-To be able to comprehend the main topic of reading passage	1. What is the main topic of paragraph 1? 1. Growing trees. 2. Choosing trees. 3. Trees for life. 4. Buying trees.			
	2. What is the main topic of paragraph 2? 1. To buy trees 2. To choose trees 3. Trees for rain 4. To love trees			

2) Record the experts' results of each test item and calculate by the following formula:

$$\text{Formula is } \text{IOC} = \frac{\sum R}{N}$$

While, IOC stands for the index of relevancy between the content or test item and behavioral objectives (Index of item objective congruence)

$\sum R$ stands for the summation of the experts' determination

N stands for the total number of experts

2) Criterion validity

This provides an indication as to whether the instrument can be measured against some other criterion. When researchers are developing a test for obtaining information to distinguish between people who are field dependent and field independent, they will need to compare the instrument with another procedure which is acceptable as a valid measure of these variables. If the two procedures collate with one another, that will provide evidence of the validity of the instrument. These types

of validity are also referred to as *concurrent validity*. *Predictive validity* is another type of criterion validity which provides information on whether the procedure is capable of predicting certain behavior. *For example, if an entrance examination is used to place students in the different levels of language classes, its predictive validity will be determined by whether those placed by it actually function well in those classes.*

3) Construct validity

It is used when the researcher needs to examine whether the data collection procedure is a *good representation* of and is *consistent* with *current theories underlying the variable being measured*. In an example of a researcher using a procedure to collect data on the language proficiency of the subjects, the construct validity of such a procedure will be dependent on whether that procedure is *consistent with current theories on language proficiency*. This type of validity is the most important and also the most difficult type of validity to obtain evidence for.

4) Item analysis

It is a procedure used to examine the quality of items or questions on an instrument. By using this procedure the researcher can obtain information on whether *the items are too easy or too difficult*, and whether the *items are well phrased and easily understood by the respondents*. Items or questions found *not to be of a high quality can be either revised or removed* from the instrument. It is important that any instrument should provide varied information, and differentiate and discriminate among the research subjects, thus providing meaningful information. Through the process of item analysis is, it possible to ensure that the questions provide such information.

Other factors, such as the time it takes for administration, the efficiency of scoring, fairness, and so on, also affect the quality of the procedure. Table 6.1 is a summary list of the techniques needed for determining the quality of data collection procedures, and shows the type of information they provide.

Technique	The information it provides
Reliability	whether the scores are accurate
Test-retest	<i>whether the scores are stable over time</i>
Inter-rater	<i>whether there is agreement among judges about the score assigned</i>
Intra-rater	<i>whether a rater will assign the same score after some time has elapsed</i>
Parallel form	<i>whether two similar instruments supposed to measure the same thing actually does.</i>
Internal consistency	<i>whether the test items are related to one another and measure the same thing</i>
Validity	whether it measures what it is supposed to measure
<i>Content</i>	<i>whether the procedure represents the content accurately that is supposed to measure</i>

Concurrent	<i>whether it correlates well with a different type of instrument which is supposed to measure the same thing</i>
Predictive	<i>whether the measure can predict accurately a certain future behavior</i>
Construct	<i>whether it represents accurately to theory of the variable which it measures</i>
Item analysis	<i>whether the items and questions which appear on the instrument are difficult or easy, and whether they discriminate among the subjects of the research</i>

Table 6.1: Information for determining the quality of data collection procedures

In this module, it differentiates between data collection procedures of high and low degrees of explicitness in second language research. It discusses describing procedures used for qualitative research and then observations, interviews, questionnaires, and tests, may be used in quantitative research. Each procedure is described according to its purposes and uses. This section is followed by a discussion of the problems associated with collecting valid language data and then by a description of ways to assure the quality of the data collection procedures, focusing specifically on the reliability and validity.

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Trainee's Self-evaluation

Direction: After studying the section of the data collection of the ELCR, the trainee will self-evaluate about the lesson learned, so question yourself and write in brief to check your understanding. If you are still in doubt, return to the lessons learned.

1) Determining what constitutes data

.....

2) Procedures for collecting the data in quantitative research

.....

3) Description of data collection procedures

.....

3) Procedures of data collection in qualitative and quantitative researches typical conducted in L2 classroom research

.....

5) Issues and problems in collecting language data

.....

6) Assuring the quality of the data and the data collection procedures

.....

Test of Self-evaluation Module 6: Collecting data in English Language Classroom

- 1. Determining the data of the L2 research includes the following, except**
- A. the precise and clear definition of research variables.
 - B. the procedures of the quality assessment and statistical techniques.
 - C. operationalizing the variables by identifying a set of behaviors.
 - D. the assessment of the behaviors occur in the forms of research tools.

Self-development for Remedial Training Model
Module 6: Collecting data in English Language Classroom

Directions: This section aims to show the answers from the post-test for the trainees to check. If you get the **incorrect answers**, revise the content of the ELCR before you study the next module: Follow the suggestion in each item.

Item 1: The correct answer is B.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 6.1, and then answer the question again.

- Determining the data of the L2 research includes

Item 2: The correct answer is A.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 6.2, and then answer the question again.

- To collect the data, the researcher has to decide the issue of

Item 3: The correct answer is D.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 6.2, and then answer the question again.

-A variety of procedures include the procedures with a low degree of explicitness, such

as, and a high degree of explicitness contains

Item 4: The correct answer is C.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 6.4, and then answer the question again.

- The most suitable procedure for qualitative data is

Item 5: The correct answer is D.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 6.4, and then answer the question again.

-The most suitable procedure for qualitative data can be.....

Item 6: The correct answer is A.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 2.3, and then answer the question again.

-The procedure to measure language knowledge can be.....

Item 7: The correct answer is B.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 6.4, and then answer the question again.

-The procedure to collect a number of the subjects' behaviors is

Item 8: The correct answer is C.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 6.4, and then answer the question again.

-The procedure to study in-depth information- gathering and free response is

Item 9: The correct answer is A.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 6.5, and then answer the question again.

-To measure the language ability and competence, the most effective tool is

Item 10: The correct answer is D.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 6.6, and then answer the question again:

-The quality of data and data collection depend on

Structure of the ELCR Model: Module 7 Analyzing Data through English Language Classroom Research

Contents

- 1) Data analysis and the design of the study
 - 1.1 Definition
 - 1.2 Techniques
- 2) Analyzing qualitative research data
- 3) Analyzing descriptive research data
 - 3.1) Frequencies
 - 3.2) Central tendency measures
 - 3.3) Variability
- 4) Analyzing experimental research data
 - 4.1) The t-test
 - 4.2) The Chi-square
 - 4.3) Using the computer for data analysis

Background Concepts

1) Data analysis refers to sifting, organizing, summarizing, and synthesizing the data to derive the results and conclusion of the research. Analyzing the research data depends on the collection procedures, the research problem, the design and the type of data collection.

2) Analyzing qualitative research data comprises the following procedures: unstructured observations, open interviews, examining records, diaries and other documents. The data collected are in the form of words in oral or written modes.

3) Analyzing descriptive research data by the statistics often used in the L2 acquisition includes frequencies, central tendencies, and variability.

4) Analyzing experimental research data is done with two groups of two independent samples, two related samples, and the experimental and control groups. The frequently used inferential statistics includes the t-test, and the Chi-square (in frequency data).

Objectives

After studying the content in Module 7, trainees are able to:

- 1) define and indicate data analysis and the design of the study,
- 2) illustrate how to analyze the data of qualitative research,
- 3) explain in brief how to analyze the descriptive research data, and

- 4) indicate how to analyze the experimental research data.

Training Activities

- 1) **Pre-training stage**, trainees
 - 1.1) do the pre-test on analyzing the data in the ELCR.
 - 1.2) check the survey of trainees' opinions on the lesson learned.
- 2) **Developmental stage**, trainees
 - 2.1) learn through the handouts of analyzing the data in the LCR.
 - 2.2) discuss about what trainees have learned among the trainee groups and the trainer.
- 3) **Application**, trainees
 - 3.1) self-evaluate the content on analyzing the research data.
 - 3.2) revise the content on analyzing the research data.

Evaluation

- 1) Trainees do the post-test and feedback.
- 2) If trainees do the test incorrectly, they have to return for revising the content.

7

Analyzing the Data in English Language Classroom Research

7.1 Data analysis and the design of the study

1) Definition

Data analysis as Seliger and Shohamy's (1989) definition, refers to sifting, organizing, summarizing, and synthesizing the data so as to arrive at the results and conclusions of the research. Thus, data analysis becomes the product of all the considerations involved in the design and planning of the research.

2) Techniques

A variety of techniques are available for analyzing data. As with the data collection procedures, the selection of a specific data analysis technique will depend mainly on: a) the nature of the research problem, b) the design chosen to investigate it, and c) the type of data collected. Thus, certain types of data lend the researcher to certain types of analysis techniques. *Figure 7.1* illustrates this dependence. Data analysis is therefore valuable to the extent that there is a valid relationship between it and the other components of the research.

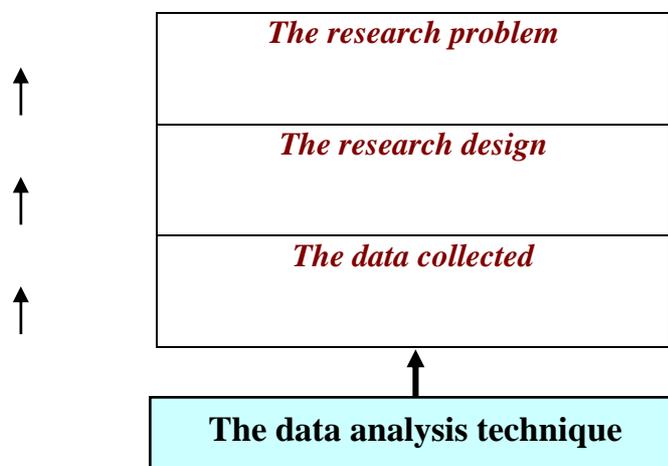


Figure 7.1: *Dependence of the data analysis technique on the other components of the research*

As a result of this dependence above, certain data analysis techniques will be more appropriate for quantitative research, while others will be more appropriate for qualitative research. *In quantitative research, the data is in numerical form, or some form which can be converted into numbers. Also, the analysis almost always utilizes statistics. Qualitative data analysis techniques deal with non-numerical data, usually linguistic units in the oral or written form.*

Figure 7.2 gives examples of typical data analysis techniques used with the different research designs. On the left hand side of the figure there are *examples of techniques for analyzing data obtained from qualitative research*, such as drawing patterns and categories from the data, with a *minimal amount of computation*. This type of analysis is *subjective rather than objective*. At the end of Figure 7.2, there are examples of techniques for *analyzing data quantitatively, utilizing different types of statistics for descriptions, predictions, generalizations, and inferences.*

Typical research designs	Ethnographic	Descriptive	Correlational	Multivariate	Experimental
Typical data analysis techniques	↓ ↓ ↓ ↓ ↓				
Qualitative	←-----→				Quantitative

	Patterns	Frequencies	Correlations	Multiple regression	t-test
	Applying schemes	Central tendencies			Analysis of variance
	Categorization	Variability		Discriminant analysis	
				Factor analysis	

Figure 7.2: Typical data analysis techniques for various research designs

In this section, both qualitative and quantitative data analysis techniques will be discussed. This is also illustrated by discussing specific examples in L2 acquisition research which, utilize the different analysis techniques. Thus, the researcher will be able to select the techniques most appropriate for his or her own type of research. Detailed guidelines and descriptions of *how to use* the different statistical procedures are at the final part of the section.

It is important to note that different statistical procedures have certain requirements for their use since certain techniques will only work with certain types of data.

7.2 Analyzing qualitative research data

Qualitative (heuristic/synthetic) research comprises the procedures of *unstructured observations, open interviews, examining records, diaries*, and other documents. The data are usually in the form of words in oral or written modes. Two main types of techniques can be identified in analyzing qualitative data, as follows:

7.2.1) Deriving a set of categories for dealing with text segments from the text itself. This is an inductive procedure. The categories have been established and they are applied to the remainder of the data. This leads to the refinement of the categories and the discovery of new patterns. Thus, they serve as an ordering system for the data content. This type of research study is usually descriptive and explanatory in nature.

7.2.2) An ordering system of categories already exists at the beginning of the process and the researcher applies this system to the data. The system is derived either from a conceptual framework or from specific research questions. It is the same kind as explanation, by selecting and sorting according to the existing system. Thus, the categories are investigated by cross-referencing, to see whether there are relationships that will assist in the understanding of the phenomenon being the studied (Tresh, 1987). An example of a qualitative study is identified in the two different analysis procedures as follows:

Example 1:

A researcher collected observational data on immigrant children acquiring a second language while interacting with native speakers. The researcher was interested in observing the morphological and syntactic errors of the learners and the reactions of the native speakers to these errors in a conversational context. The material collected was in the form of audio tapes of the verbal interactions of the immigrant children with the native speakers in the classroom, working in small groups.

The data of this research was analyzed using a different type of qualitative analysis.

*The first set, 'the errors', was analyzed with the aid of an organizing scheme.
*The second set, reactions of the native speakers, was analyzed by deriving categories from part of the data and then confirming them with the rest of the data.

Below is a description of the steps the researcher followed in the process of analyzing the syntactic and morphological errors with the organizing scheme (technique 7.2.2) from the first step.

- 1) The researcher transcribed the tape data to focus directly on the errors.
- 2) He took an ordering system found in the literature on error analysis and applied to his own data. Then, he counted the frequencies of errors for each of categories in the organizing scheme.
- 3) He provided some explanations and suggested hypotheses as to why these particular types of errors patterns occurred in this group of learners why these categories were different from those found in the literature.
- 4) He applied measures of reliability in order to verify and confirm that the scheme had been applied accurately to the data without being influenced by possible biases of his own. The researcher asked an independent researcher to repeat the task and apply the scheme to some portion of the transcribed data. The data in agreement between the researcher and the independent rater were obtained and reported as the results of the study.

In order to analyze the reactions of the native speakers to the errors, the researcher used a qualitative data analysis in which categories of reaction were derived directly from part of the data without an organizing scheme.

The second step below includes steps which the researcher follow in analyzing

- 1) A portion of the tapes was carefully reviewed and notes were made about the types of reactions of the native speakers.
- 2) A list of the different types of reactions derived from the data was compiled.
- 3) The list was analyzed in an attempt to collapse and combine certain categories of types of reactions.
- 4) A finite group of patterns and sub-patterns was formulated.

- 5) The categories and patterns identified were applied to the remainder of the data for further refinement.
- 6) A definite group of patterns and categories of reactions was formulated.
- 7) To examine the reliability of the data, tapes were given to other researchers who went through the same steps and obtained their own categories of types of reactions. These categories were then compared with those of the first researcher. The patterns on which two researchers agreed were considered valid in this context.

It should be noted that different types of data analysis could have been applied to *each set of data*. For example, there were no theories or previous research that had already classified the types of morphological and syntactic errors which learners made. Then these classifications of errors would have had to be derived from the data themselves. In the same manner, if categories of types of reactions of native speakers to errors made by learners had been previously identified in some other research, *these categories could have been applied to the data*.

In the next example, it indicates the specific steps the researcher took in analyzing qualitative data and establishing the reliability of the categories.

Example 7.2:

A researcher (Gordon, 1987) was conducting research in order to discover the strategies which test-takers use while doing a reading comprehension test. The qualitative verbal data were collected from 36 test-takers through the 'think aloud' technique where the test-takers reported to the researcher on processes which they were engaged in while attempting to answer test questions. The interviews were audio recorded.

From the example, the data were analyzed through the procedure of protocol analysis. Here, the data determines the analysis rather than the analysis imposing predetermined categories on the data. The following describes the stages:

- 1) Written transcriptions were made of the verbal protocols for each subject.

- 2) The protocols were carefully reviewed and notes were made relating to processes involved in answering test questions.
- 3) A comprehensive list of all strategies, processes, and information relevant to the issue of test-taking strategies was compiled. This list was analyzed in an attempt to conclude and combine certain categories. A finite group of categories and sub-categories was formulated. These categories then became the criteria by which each of the protocols was analyzed.
- 4) The answer to each question in the test was analyzed according to the categories formulated.
- 5) Descriptive statistics (frequencies and percentages) were computed for each of the categories. (In this phase it is not always possible to observe or infer information in all cases. The researcher may often feel that intensive probing of a reluctant respondent would result in invalid information.)
- 6) In order to obtain some indication of the reliability of the analysis and the categories formulated, rater reliability was examined in the following ways:

Inter-rater reliability was judged by giving a random selection of four protocols to a judge who was a professional in the field of applied linguistics, and was asked to analyze and categorize the responses. The results were compared with the researcher's analysis and categorization. A high degree of agreement was achieved between the judge's analysis and that of the researcher on all four of the protocols.

Intra-rater reliability was assessed by the researcher re-rating half of the sample of tapes after a period of time had passed from the initial categorization on the responses in the protocols, in order to compare the degree of agreement which existed between the first and second analyses. High agreement was obtained, which established an indication of the reliability of the analysis.

In summary, qualitative analysis is the process used to reduce data obtained from qualitative research to its essentials. The process is not mechanical but rather involves skilled perceptions on the part of the researcher. The data still need to be analyzed systematically, since they must lead to results that others will accept as representative. If this is done, the results of analysis will provide a valid representation of the essential features of the data.

7.3 Analyzing descriptive research data

Data obtained from descriptive research are generally analyzed with the aid of *descriptive statistics*. These provide information such as:

- a) *how often* certain language phenomena occur,
- b) the *typical* use of language elements by different language learners,

c) *how different* and *varied* certain groups of language learners are with regard to certain linguistic phenomena, and

d) the *relationship* among various variables.

Descriptive statistics refers to a set of procedures which are used to *describe* different aspects of the data. Such information can sometimes be the sole purpose of the research, or at other times, it may provide the researcher with basic insights and an initial impression of the data, information that will be useful for subsequent analysis phases of the research.

The types of descriptive statistics are: 1) *frequencies*, 2) *central tendencies*, 3) *variability* and 4) *correlations*. However, here the three types usually used in *actual practices of the classroom research* will be discussed as the following aspects:

7.3.1) *Frequencies*

Frequencies (f) are used to:

1) indicate *how often* a phenomenon occurs and they are based on counting the number of occurrences. Such information is very useful in L2 acquisition research, where the researcher is often interested in finding out how frequently certain language elements, such as *structures, lexicon, syntax, and speech acts* are used by different types of language learners in different contexts.

2) provide *information on the performance* of the subjects on *tests and questionnaires* before the results are used for analyzing the data of the whole study. Example 7.1 below illustrates how to analyze data by using frequencies.

In a study investigating how second language learners of different backgrounds use certain types of refusal statements, a researcher presents to two groups of subjects (40 natives and 40 non-natives) in different situations, each group was accompanied by four statements of ways of expressed refusal. The subjects are required to select the statement which they are most likely to use in the situations.

In analyzing the results of the above study, the researcher needs to compute the frequencies for the selection of each statement by each group and to compare the two groups. The frequency of responses to one of the situations is presented in Table 7.1. The table shows how often each of the statements was selected by the two groups for one situation.

Statement	Frequencies (natives) N = 40	Frequencies (non-natives) N = 40
1	20	10
2	15	15
3	5	3
4	0	12

Table 7.1: Frequencies of selecting refusal statements

Statement 1 was selected by 20 of the 40 native subjects, but only by 10 of the non-natives. Statement 4, on the other hand, was selected by 12 of the non-natives but by none of the natives. Clearly, it is possible, through an examination of the frequencies to see how common (how frequent) certain speech functions are among different language learners. (Whether the difference observed between the natives and the non-natives is meaningful statistically will have to be investigated by a different technique, the Chi-Square, which will be discussed later in this section.

Frequencies can also be useful for obtaining insight into data of the research. As in Example 7.2 below:

A researcher is conducting a study of the length of residence of immigrants in the new country and their language proficiency, and so constructs a language proficiency test which is administered to three groups of learners. Group 1 consists of learners who have resided in the country between 1 and 3 years, but group 2 has resided there between 4 and 7 years, and group 3, 8 years or more. The researcher wants to find out how frequently certain test scores occurred

Table 7.2 shows the frequencies, that the number of subjects in each category who obtained a specific score in each of the three groups, in a frequency table. These frequencies are expressed in class intervals which are a useful way of condensing, organizing, and summarizing the data when the score range is in large. In this example, where scores ranged from 0 to 100, the researcher grouped them into intervals of fives and thus the data are condensed into smaller units.

It can be seen from the table that the three groups *performed differently on the same test*. By examining the frequencies, the researcher can see that for the *third group the test was relatively easy*, while it was much more *difficult for the first group*. The table also shows that while in the *first group there was a wide range of levels of performance*, the *second and the third groups show similar distributions* of scores.

Score	(f) : Group 1 (1-3 years) N = 30	(f) : Group 2 (4-7 years) N = 30	(f) : Group 3 (8 years and over) N = 30
95-100	2	5	10
90-94	1	3	8
85-89	1	4	6
80-84	4	8	3
75-79	5	3	2
70-74	3	2	1
65-69	6	2	0
60-64	0	0	0
55-59	2	2	0
50-54	3	0	0
45-49	1	1	0
40-44	2	0	0

Table 7.2: Frequencies of scores of three groups of language learners on an English language proficiency test

Frequencies can therefore provide the researcher with meaningful information on the measures used in the research even before the language proficiency of the three groups is compared. This can help the researcher obtain insights into and understanding of the data and the results.

Frequency results can also be presented through a *crossbreak table*. This is a display of frequencies or percentages (or other types of data) that points out similarities or differences in sharp contrasts, and is therefore, useful in displaying trends and patterns.

The crossbreak table in Table 7.3 shows how the two groups ‘monolinguals’ and ‘bilinguals’ differ as to the frequencies of high or low scores on a metalinguistics test. A high metalinguistics score was obtained by 25 of the bilinguals but only by 8 of the monolinguals, while a low score was obtained by 19 of the monolinguals but by only 2 of the bilinguals. (In order to find out whether the difference between the groups is statistically significant, the researcher can use the *Chi square* test procedure which is discussed later in this section.)

Score	High score	Low score
Monolinguals	8	19
Bilinguals	25	2

Table 7.3: A crossbreak table for monolinguals and bilinguals in a metalinguistics test

In summary, frequencies provide the researcher with information about how frequent certain phenomena are, as well as initial insights, impressions, and understanding of the data. They can be reported through verbal descriptions, tables, and graphs.

7.3.2) *Central tendency measures*

Central tendency measures, which are also part of *descriptive statistics*, provide information about the average and the typical behavior of subjects in respect to a specific phenomenon. This statistic type contains: 1) the mean (\bar{X}), 2) the mode, and 3) the median.

1) *The mean* (\bar{X}) is the sum of all scores of all subjects in a group divided by the number of subjects.

2) *The mode* is the score which has been obtained by the largest numbers of subjects, that is, the most frequent score in the group.

3) *The median* is the score which divides the group into two in such a way that half of the scores are above it and half are below it.

The mean (\bar{X}) is the measure which is most frequently used because of its stability in repeated sampling and its use in advanced statistical analysis procedures.

A researcher conducts a study on the use of relative clauses by two groups of language learners, one of which has been exposed to formal instruction in the language, while the other has received no formal instruction. Each group consists of ten subjects. The researcher designs a task which requires the subjects to combine two single sentences into one, using the appropriate relative clauses. Each correct use of relative clause gets one point. There are ten pairs of sentences to combine.

Table 7.4 displays the scores that each of the ten subjects received on the task. The mean (\bar{X}) of each of the groups is the average score in each group and it is the summation of all the scores divided by the number of subjects. The \bar{X} was seven for each of the groups $70/7 = 10$.

The mean, then, provides information on the average performance of a group on given tasks, and helps the researcher obtain insight by condensing large amounts of data. In the example above, the performance of each *individual* on the task does not provide meaningful information. However, the mean tells the researcher how the *group* as a whole performed and that provides more significant information.

Subject	Group A Formal instruction Score (N = 10)	Group B No formal instruction Score (N = 10)
1	6	10
2	6	8
3	7	5
4	8	10
5	7	9
6	8	8
7	7	7
8	8	6
9	6	4
10	7	3
Total	70	70
Mean (\bar{X})	7	7

Table 7.4: Scores and means of two groups of learners on a task testing the use of the relative clause

7.3.3) Variability

Variability provides information on the spread of the behaviors or the phenomena among the subjects of the research. Specifically, it indicates how heterogeneous or homogeneous subjects are with regard to the behavior.

It is very possible, for example, that two groups will have the same mean, but the spread of scores will be different; while in one group all subjects obtained similar scores, in the other, there was a wider spread of the scores and the group was more heterogeneous, that is, it had greater variability.

There are a number of variability measures. The most common one, which is therefore often used in subsequent analysis of the research data, is *the standard deviation (S.D.)** It is the square root of the averaged square distance of the scores from the mean. The higher of the standard deviation, the more varied and more heterogeneous a group is on a given behavior, since the behavior is distributed more widely within the group.

If we return to Table 7.4, it is clear that the group which received no formal instruction has higher variability, since the scores are more widely distributed among the different subjects. Some obtained higher scores, others obtained lower one. In fact, most of the scores between 1 and 10 had received formal instruction but had lower variability since most of the scores were found around the mean of 7. It is

Structure of LCR Model : Module 7
 therefore a more homogeneous group. The S.D. for group A was actually .774 and for group B, 2.32; the more varied group having the higher standard deviation.

Another measure of variability used in statistical analyses is the variance, which is the standard deviation squared.

* Computing the standard deviation is performed as follows:

$$\text{S.D.} = \sqrt{(\sum(X - \bar{X})^2)/N}$$

Where X = students' score; \sum = sum of ; N = number of students;

\bar{X} = mean; $\sqrt{\quad}$ = square root

Thus:

Group A		Group B	
X - \bar{X}	(X - \bar{X}) ²	X - \bar{X}	(X - \bar{X}) ²
6 - 7 = -1	-1 ² = 1	6 - 7 = -1	-1 ² = 1
6 - 7 = -1	-1 ² = 1	8 - 7 = 1	1 ² = 1
7 - 7 = 0	0 ² = 0	5 - 7 = -2	-2 ² = 4
8 - 7 = 1	1 ² = 1	10 - 7 = 3	3 ² = 9
7 - 7 = 0	0 ² = 0	9 - 7 = 2	2 ² = 4
8 - 7 = 1	1 ² = 1	8 - 7 = 1	1 ² = 1
7 - 7 = 0	0 ² = 0	7 - 7 = 0	0 ² = 0
8 - 7 = 1	1 ² = 1	6 - 7 = -1	-1 ² = 1
6 - 7 = -1	-1 ² = 1	4 - 7 = -3	-3 ² = 9
7 - 7 = 0	0 ² = 0	3 - 7 = -4	-4 ² = 16

S.D. $\sqrt{(6/10)}$	$\Sigma = 6$	S.D. $\sqrt{(54/10)}$	$\Sigma = 54$
S.D. = .774		S.D. = 2.32	

Measures of variability are very important in describing research data and most of the more complex analyses used for analyzing data from experimental as well as from multivariate research rely heavily on them.

In most research studies, the mean (\bar{X}), the standard deviation (S.D.), and the number of subjects (N), are reported together in a special descriptive statistics table, as in Table 7.5:

Group	N	\bar{X}	S.D.
Monolinguals	24	35	4.7
Bilinguals	20	45	7.2
Trilinguals	22	48	10.1

Table 7.5: Mean (\bar{X}), standard deviation (S.D.), and the number of subjects (N) for test scores of three groups of language learners

There are, then, three common procedures for obtaining descriptive information about the data of a study: frequencies, central tendencies (principally the mean), and variability (the standard deviation and the variance). This type of information may be the main purpose of the research, that is, the description of the data. It is also required for more complex types of analysis, and can provide the researcher with a greater insight and understanding of the data to be analyzed.

In actual English language classroom research, all above analyses of data are usually used because most of the classroom research is simply investigated. Therefore, other types of statistical techniques in descriptive research are not illustrated. However, *one of the methods of data analysis essential for classroom research is analyzing experimental research data*, which is discussed in the following section.

7.4 Analyzing experimental research data

This section discusses procedures for analyzing data obtained from different types of experimental designs. The different designs call for different methods of analysis. When three groups, for example: 1) *two independent samples*, 2) *two related samples* and 3) *experimental and control* samples are being compared; the researcher will use the t-test.

7.4.1) The t-test

Function: The situation in which the researcher *assigns one group of subjects to an experimental treatment* and another group of similar *subjects to a control group* is one of the most popular experimental design. The *t-test* is used to compare the means of *two* groups. It helps determine how confident the researcher can be that the differences found between two groups (experimental and control) as a result of a treatment are not due to chance. The results of applying a *t-test* provide the researcher with a *t-value*. That t value is then entered in a special table of *t* values included in most statistic books, which indicates whether given the size of the sample in the research, the *t-value* is, statistically significant.

Example:

A researcher is comparing the performance of two randomly selected groups learning English by two different methods. The experimental group learns with the aid of the computer, that each frontal lesson is followed by a practice session with the computer. The control group is not exposed to the practice session with the computer, but has practice sessions with the teacher. The researcher investigates the effect of the computer practice sessions on students' achievements in English. At the end of the three-month experiment, both groups undergo an achievement test. The researcher uses the t-test to examine whether there are differences in the achievement of the two groups.

The results indicate the t-value to be 1.786. The researcher enters this value in the table of t-values and finds that, based on the size of the sample, that value is significant at the .05 level. The researcher reports the results as: $t = 1.786; p \leq .05$, and therefore rejects the null hypothesis which states that the difference between the two groups is not

In the example just described, the researcher uses the t-test procedure to examine the differences between the two groups where one is exposed to a certain

treatment (computer practice sessions) and the other is not. The results of the analysis provide the researcher with information regarding the effect of using the computer on achievements in learning English.

It is advisable when presenting the t-test results, to precede them with a descriptive statistics table displaying the mean (\bar{X}), standard deviation (S.D.), and the size of sample (N), in order to provide a better insight into the data.

The t-test described is applied to two independent groups. *A slightly different t-test formula is applied when the comparison is between the same group compared at two different times (such as pre- and post-tests).*

7.4.2) The Chi-square

The chi-square (χ^2) is a data analysis procedure which helps the researcher address questions about relations between two *nominal variables*. In this procedure the researcher compares the frequencies observed in a sample with some theoretical or expected frequencies. The frequencies refer to categories used to classify the data, such as males/females, natives/non-natives, monolinguals/bilinguals, or high language learning achievers/low achievers.

Example:

In a study on the use of certain speech acts, the researcher needs to find out whether there is a significant difference between native and non-natives in using certain ways of requesting. The researcher selects a sample of natives and non-natives and finds out through a questionnaire how often they use specific requests in speech, and then counts the frequencies of these requests and applies the Chi-square to examine whether there are statistically significant differences in the uses of these speech acts by natives and non-natives, based on these frequencies.

The researcher obtains a significant Chi-square (χ^2). This indicates that there is a meaningful difference in the use of different types of requests between native and non-

It is possible to apply the technique to data involving more than two categories, such as monolinguals, bilinguals, and trilinguals, provided that it is used with frequency data. Scores obtained on tests can also be used in the Chi-square analysis if they are categorized as frequencies and the researcher creates categories such as *high, average, and low* frequency based on the test scores.

As discussed, many of the problems in a second language acquisition call for the examination of frequencies of certain behaviors by different language learners in different contexts. The Chi-square procedure is therefore used extensively in analyzing data in L2 acquisition research.

7.4.3) Using the computer for data analysis

Most of the data analysis techniques can be performed with a computer. A number of statistical packages designed for this type of research are available. The

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 computer is essential for the analysis of most quantitative research data, since it can handle complex analyses of large amounts of data in a very short time and at a very reasonable cost.

The most commonly used systems are; *Statistical Package for Social Sciences* (SPSS) and its updated version, SPSS for Windows, which includes programs for most types of data analysis. The researcher is advised to find out which packages are available when preparing the research proposal.

This section describes the different phases involved in performing computer data analysis as follows:

1) The computer analysis should be planned in advance so that when preparing the data collection tools, a coding system can be integrated into the procedure. When using a questionnaire, for example, it becomes very useful to have a coding system to facilitate the process of recoding the data later.

2) After the data collection procedure has been administered, the data are transferred to coding sheets or directly to the computer database.

3) After the data have been entered onto the coding sheets, they need to be transferred to the computer data base. This can often be done with professional help, especially when there are large amounts of data to be entered.

4) When the data are in the computer database, it is essential to check that the information has been entered accurately. It is possible to obtain a printout of the data and compare this with the coding sheets.

5) In preparing for the analysis, instructions should be formulated to guide the computer on the specific analysis that needs to be performed.

6) It is common not to obtain meaningful results from the first analysis, as there may be various problems such as errors in coding or in the description of data.

7) When working with the computer, attention must be given to the smallest details.

8) Once the results are obtained and printed out, the researcher reads the outputs to obtain the information needed. (Computer manuals give guidance on this.)

It is important for the researcher to have a 'feel' for the results and to use intuition. False results may be produced if there are any errors in the program, the database, or in the running of the program. The researcher needs to keep a close watch on the results to see if they seem sensible. It is important to *understand* the statistics used for the data analysis. However, it is suggested that the researchers acquaint themselves with the specific statistical procedures used in a given piece of research, this, in turn, will lead to a more valid interpretation of the results.

In summary, this chapter introduces the concepts of analyzing data and differentiating between quantitative and qualitative types of data analysis. Then it describes the techniques used to analyze the data obtained from qualitative, descriptive, and experimental research. The various techniques were described within the context of specific second language acquisition research problems. This section was ended with a brief outline of stages involved in using the computer for analyzing research data.

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Trainee's Self-evaluation

Directions: After studying the section of analyzing the data of the ELCR, the trainee will self-evaluate about the lesson learned, so question yourself and write in brief to check your understanding. If you are still in doubt, return to the lessons learned.

1) Data analysis and the design of the study

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2) Analyzing qualitative research data

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3) Analyzing descriptive research data

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4) Analyzing experimental research data

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**Test of Self-evaluation: Module 7 Analyzing the data through
English Language Classroom Research**

<p>1. What does the data analysis technique not mainly depend on?</p> <p>A. The research problem. B. The research design. C. The statistical techniques. D. The data collected.</p>
<p>2. Which <u>is the issue the data analysis for the qualitative research?</u></p> <p>A. Only the form of different interview techniques. B. The form of words in oral or written modes. C. The deductive procedure. D. Different statistical techniques.</p>
<p>3. What aspect does analyzing descriptive research data refer to?</p> <p>A. Analyzing with the qualitative techniques. B. Analyzing how often certain language phenomenon occurs. C. Analyzing the relationship among different variables. D. Analyzing with the aid of descriptive statistics.</p>
<p>4. Which <u>statistical technique is not</u> frequently used in L2 descriptive data?</p> <p>A. The t-test B. Frequencies C. Central tendencies D. Correlations</p>
<p>5. What <u>is the purpose of the central tendency measures?</u></p> <p>A. To provide language proficiency from the test of the subjects. B. To indicate how often a phenomenon occurs by the subjects. C. To provide the average and the typical behaviors of the subjects. D. To report and discuss relevant and contrasting research results.</p>
<p>6. What is the main purpose of the t-test?</p> <p>A. To compare the frequency of data between two groups. B. To show the information from the experimental group. C. To provide information on the spread of the subjects' behaviors D. To compare the subjects' means between two groups.</p>
<p>7. What <u>is the main objective of the Chi-square (X^2)?</u></p> <p>A. To provide information on the spread of the subjects' behaviors.</p> <p>B. To compare the frequencies of data between groups. C. To provide information on the spread of the subjects' competencies. D. To compare the subjects' means between two groups. E.</p>

8. To find out the errors of students' writing, which statistical technique should be used to compare their groups?

- A. The Chi-square.
- B. The t-test.
- C. The variability.
- D. The central tendency.

**Self-development for Remedial Training Model: Module 7
Analyzing the data through English language classroom**

Directions: *This section aims to show the answers from the post-test for the trainees to check. If you get the incorrect answers, revise the content of the ELCR before you study the next module: Follow the suggestion in each item.*

Item 1: The correct answer is C.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 7.1, and then answer the question again.

- The data and the design of the study is based on the

Item 2: The correct answer is B.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 7.2, and then answer the question again.

- The data analysis of qualitative research data involves

Item 3: The correct answer is D.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 7.3, and then answer the question again.

-Analyzing descriptive research data is used by the means of

Item 4: The correct answer is A

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 7.3, and then answer the question again.

-The statistical techniques used in descriptive research data includes

<p>Item 5: <u>The correct answer is C.</u></p> <p>Do you have the correct answer? [] Yes [] No</p> <p>If you have an incorrect one, return to revise Section 7.3, and then answer the question again.</p> <p>-The principal purpose of the central tendency measures is to.....</p> <p>.....</p>
<p>Item 6: <u>The correct answer is D.</u></p> <p>Do you have the correct answer? [] Yes [] No</p> <p>If you have an incorrect one, return to revise Section 7.4, and then answer the question again.</p> <p>-The t-test is used for</p> <p>.....</p>
<p>Item 7: <u>The correct answer is B.</u></p> <p>Do you have the correct answer? [] Yes [] No</p> <p>If you have an incorrect one, return to revise Section 7.4, and then answer the question again:</p> <p>-The objective of the Chi-square is</p> <p>to</p> <p>.....</p>
<p>Item 8: <u>The correct answer is A.</u></p> <p>Do you have the correct answer? [] Yes [] No</p> <p>If you have an incorrect one, return to revise Section 7.4, and then answer the question again:</p> <p>-To find out the frequency of students' errors in writing, the statistical technique is</p>

If you have studied and revised your incorrect answers, please study the next module

Structure of the ELCR Model: Module 8 Reporting, Summarizing, and Interpreting the Results

Contents

- 1) Reporting and summarizing
 - 1.1) Quantitative research
 - 1.2) Qualitative research
- 2) Interpreting the results
 - 2.1) Conclusions
 - 2.2) Implications
 - 2.3) Recommendations
- 3) Reporting research
 - 3.1) Types of reports
 - 3.2) The components of the research report
 - 3.3) Closing the research cycle

Background Concepts

1) In reporting and summarizing, the researchers report the results that are obtained from the analysis of the data, often using tables, graphs, charts, and category lists; they then synthesize the findings in a cohesive and clear way.

2) In interpreting the results, the researchers go beyond the results toward conclusion, implications, and recommendations based on the results.

3) Reporting the research is conducted after the research has been completed, from the initial phase of selecting the problems and determining the purpose of the study, to the last phase of interpreting its results, the researcher as a whole needs to be reported to the relevant audience.

Objectives

After studying the content in Module 8, trainees could be able to:

- 1) explain how to report and summarize the language classroom research,
- 2) point out how to interpret the results of the language classroom research,
- 3) identify and report the full paper of the language classroom research, and
- 4) conclude the sequence of reporting language classroom research.

Training Activities

- 1) **Pre-training stage**, trainees
 - 1.1) do the pre-test on reporting, summarizing,, and interpreting the results of the language classroom research.
 - 1.2) check the survey of trainees' opinions on the lesson learned.
- 2) **Developmental stage**, trainees
 - 2.1) learn through the handouts of reporting, summarizing, and interpreting the results on language classroom research.
 - 2.2) discuss about what trainees have learned from trainee groups and the trainer.
- 3) **Application**, trainees
 - 3.1) self-evaluate on the reporting, summarizing, and interpreting the results in the ELCR.
 - 3.2) revise the content on the reporting, summarizing, and interpreting the results in the ELCR.

Evaluation

- 1) Trainees do the post-test and feedback.
- 2) If trainees do the test incorrectly, they have to return to the content for revising.

8

Module 8: Reporting, Summarizing, and Interpreting the Results in English Language Classroom Research

Once the data have been analyzed and the results obtained, the last phase in the research process is to *summarize* the results, *interpret* them, and then to *report* the research relevant to the general context of the research problem and topic. This is the point at which the researcher asks questions such as: What are the major findings of the research? What do these results mean? What can be learned from them? What are their implications? How can they contribute to existing knowledge in the research area? What recommendations can they lead to?

In *reporting, summarizing* section, the researchers report the results that are obtained from the analysis of the data, often *using tables, graphs, charts, and category lists*; they then synthesize the findings in a cohesive and clear way. In the *interpretation section* the researchers go beyond the results toward *conclusion, implications, and recommendations* based on the results. In most research reports, this part is referred to as the '*discussion*'. Each section will be considered in terms of quantitative and qualitative research (Seliger and Shohamy, 1989).

8.1 Reporting and summarizing

8.1.1) Quantitative research

The research results in quantitative research is usually done through presentation of the statistical results obtained, illustrated by *tables, graphs, and charts*. The type of tables and graphs used in reporting will depend on the specific data analysis technique that is performed. In descriptive research, for example, results will be frequencies, and the sample sizes. The results of experimental research will be presented by giving the *F* (*ANOVA – analysis of variance*) or the *t values*, together with the degrees of freedom and the p value (level of significance), either in table form or through verbal descriptions, or a combination of the two.

8.1.2) Qualitative research

The method of reporting the qualitative results also depends on the specific type of analysis used. Thus, when *categories* are derived directly from the data, the report will explain the *process* used in deriving them, as well as providing *a list or a description* of the categories obtained. If the analysis is performed by applying an *organizing scheme* to the data, a description of the *frequencies* obtained for each of the categories will be provided, either in *raw numbers, or in percentages*. For both types of analyses, quotations and actual examples from the *written or oral data, anecdotes, diagrams, and tables* displaying the frequencies (if they are available), are provided to give supporting evidence for the patterns and categories obtained.

An important element in reporting any type of research is to include information about the *reliability and validity of the procedures* used to collect the data. This is especially important in reporting the results from qualitative research to include *descriptions of the process* of conducting the research, the *different procedures used* to collect the data, the research site, and the *exact conditions* during the data collection, and the *validation procedures* applied. While it is important to include such information in reporting both types of research, it is of *special significance in qualitative research* since there are no set procedures for conducting such research, and therefore *documenting the process* is essential for validating the results.

Below are examples taken from reports of the results of some studies:

Example 1:

Pica, Young, and Doughty (1987) examine the impact of the type of interaction on comprehension. In reporting the results, the authors display them in a number of tables which compare the comprehension scores of the subjects in the two experimental situations. Each of the tables focuses on different features of the input and provides the means and the standard deviations, and show whether the differences are significant in the t-test analyses performed on the data for each of the input features.

For reporting qualitative research, the example of the analysis is as follows:

Example 2:

A researcher collected observational data on immigrant children acquiring a second language while interacting with native speakers. The researcher was interested in observing the morphological and syntactic errors of the learners and the reactions of the native speakers to these errors in a conversational context. The material collected was in the form of audio tapes of the verbal interactions of the immigrant children with the native speakers in the classroom, working in small groups

From the data analysis of the study, the results are reported below:

The results *are reported by listing the types and categories of errors* in relation to the organizational scheme that is implemented on the data. The categories include some numerical data in the form of the errors which are reported for each child individually. The lists are accompanied by specific examples, such as that a certain error was observed in 30 percent of cases, and that it was produced only when the child answered a question, but never when he or she initiated one.

The reactions of the native speakers to these errors are treated in a similar way. Since they are derived directly from the data without an organizing scheme, the researcher describes the process used to derive them in sufficient detail for another researcher reviewing the data to be able to obtain identical categories. *The descriptions of the reactions are also reported by presenting frequencies, such as that a certain reaction was observed in only 10 percent of cases, while another reaction was observed in about 50 percent; or that native speakers ignored errors in unfamiliar words in about 40 percent of occurrences while in 10 percent the native speakers asked the learner to explain what he or she meant, Here, too, the descriptions are accompanied by quotations of the actual responses made by the native speakers to certain types of errors, indicating particular speakers.* For example, 'John, who is a shy child, almost always ignored the errors, while Ann, who is more open and outgoing, kept asking: "And what do you mean by that? Can you please say it again? I do not understand what you say." These examples are very helpful in exemplifying and explaining the categories as well as in familiarizing the reader with the data.

8.2 Interpreting the results

Once the results have been reported and described, they must be interpreted. Interpretation occurs at a number of levels. Common to all these levels is that the research results are carried one step further toward an examination of their meaning in a broader context and toward possible recommendations. *Different levels of interpretation are often put in the discussion section of the report as the subsequent aspects:*

8.2.1) *Conclusions*

Conclusions discuss the meaning of the research results and place them in a boarder and more general context and perspective, often generalizing beyond the specific sample of the study.

8.2.2) *Implications*

Implications address the consequences of the results by relating them to the more general theoretical and conceptual framework of the research topic. It is here that the researchers add their own speculations and interpretations from the same results, and this may lead to disagreement and discussion.

8.2.3) *Recommendations*

Recommendations are general or specific suggestions as to the use, applications, and utility of the research results. They can be written up in different forms as follows:

1) A recommendation may be made, for example, *that a new teaching method proved in the research to be advantageous should be adopted*, since the research findings revealed that those who started early did not have an advantage compared to late starters.

2) Recommendations can also be in the form of *a call for the replication of a research study with different data collection procedures and a different research design*, so as to obtain more convincing evidence for the results obtained.

3) Recommendations from a piece of *qualitative research may suggest that a quantitative research study should be conducted*, using the findings obtained in the qualitative study as hypotheses suggest.

4) The results of a piece of *quantitative research may sometimes lead to a recommendation that a qualitative study be carried out to examine the problem in an in-depth manner*, so as to explain the results obtained in the experimental research.

5) In general, results obtained from quantitative research, often based on *large, random samples, are more generalizable* and may therefore lead to conclusions that recommend implementation of programs, curricula, or methods. However, since results of *qualitative research are usually 'explanatory' nature* are often based on *small samples, and are careless generalizable. They do not often lead to recommendations for specific implementation.*

6) In L2 acquisition, it is *important that the context for which the recommendations are made is the same as the one in which the research was conducted*. For example, results obtained from the research conducted in the classroom cannot usually lead to recommendations for learning languages out of the classroom, nor are results obtained in an informal language learning context applicable to a formal school learning context. Similarly, research conducted with one group of learners, such as children, cannot usually lead to recommendations for adult learners, since it is likely that a different set of variables affects learning in each of these settings.

Some examples of interpretations of research results taken from the research studies referred to the above as in Bejaro's (1987) conclusions are stated as follows:

These findings reveal the greater effectiveness of the two group methods in developing listening comprehension skills and the greater effectiveness of the STAD techniques compared with the DG and the whole-class methods in teaching and learning discrete points (such as grammar and vocabulary) in the EFL classroom (p.493).

In discussing the implications of these results, the researcher addresses the issue of ‘what promoted higher language achievement in the classes utilizing small group techniques’. Here the researcher relates the results of the study to the more general theoretical and conceptual framework of the research topic, that of the interaction of the social and communicative skills within the experimental context of the small-group.

This is in line with Taylor’s (1983, p.72) view of the features, classroom instruction should incorporate. It is also in accordance with the communicative approach to language teaching, which assumes that language acquisition occurs with intensive engagement in extended discourse in real communicative contexts (Breen and Candlin; 1980, Krashen; 1981, Taylor; 1983, Widdowson; 1987).

The researcher continues with the implications of the different parts of the results according to the stated social and linguistic theories. The same results could possibly have led another researcher to arrive at different implications.

Finally, the researcher provides specific recommendations for classroom teaching, based on the results:

Based on the theoretical principles underlying this research and the findings reported here, a cooperative small-group methodology in the language classroom is recommended. The different group techniques complement one another; they serve different teaching objectives in the language class and thus form the link between the teaching content (what) and the teaching process (how). Implementation of this approach requires intensive teaching training for use of techniques, both in terms of operational procedures in the classroom and in terms of appropriate design of the learning tasks.

It is at this point that the researcher should ask questions as to whether the recommendations are warranted by the results and whether these recommendations are generalizable to all language learning contexts and to learners other than those participating in the research.

8.3 Reporting research

Once the research has been completed, from the initial phase of selecting the problem and determining the purpose of the study, to the last phase of interpreting its results, the research as a whole needs to be reported to the relevant audiences.

8.3.1 Types of reports

There are a number of formats for reporting classroom research, such as articles to appear in journals, reports addressed to funding agencies, theses or dissertations as part of the requirements for university degrees, and papers to be presented at conferences. These formats differ from one another mostly in their purposes and the audiences which they address briefly as follows:

1) *The journal article*

The research is reported in brief, yet informative way, focusing mostly on the main features of research such as purpose, review of literature (often referred to as 'background'), procedures used for carrying out the research accompanied by tables, charts, and graphs, and interpretations of the results (often referred to as 'discussion').

2) *The research report*

This is another method of presentation which generally refers to the document required by agencies support and fund research. The report summarizes the research results, and includes conclusions and recommendations based on the whole study.

3) *The conference paper*

It is a way of reporting research at conferences, or seminars. At such meeting research papers are usually presented orally. The research is reported in a concise, yet informative way, focusing on the most essential elements of the research accompanied by the handouts and materials in the presentations.

8.3.2 The components of the research

There are different forms of reporting research. Each form varies in the emphasis it puts on the different components of the research. In general, each will include elements of the following components: *introduction and description of the problem or topic, review of the literature, design and methodology, data analysis and findings, and discussions of the results* as in more subsequent details.

1) *Introduction and description of the problem or topic*

In this section, the researcher discusses the nature of the research. The introduction contains:-

- 1) *the background to the research problem or topic,*
- 2) *the purpose of the research,*
- 3) *the significance of the research,*
- 4) *the hypotheses and research questions but in general terms, and*
- 5) *definitions of important terminology.*

2) *The literature review*

In this part, the researcher reports on the literature relevant to the problem: *journal articles, research reports, and books that focus on different aspects of the problem, both in L2 acquisition and in related areas.*

In the description of the related literature the researcher focuses on the theoretical claim made in the research. The researcher makes up a survey of:

- 1) *the research findings, particularly the major findings of the studies*

with discussion of how they are obtained and what can be learned from them and applied to the specific research that is about to be conducted,

2) a critique of the research studies quoted, pointing to any problems in design, instrumentation, analysis, and conclusions.

Thus, the literature review is intended to provide *a theoretical framework* for the research as well as a description of *how different studies contribute to the topic, leading to a statement of and a rationale for the study.*

3) *The design and methodology*

This component generally contains the following aspects:

- 1) a clear and precise description of the research questions or hypotheses and of the different variables of the study,
- 2) the specific methods which the researcher selected to investigate the research problem or topic,
- 3) the specific design of the study (whether it is qualitative (descriptive), experimental or correlation, or example),
- 4) the discussion of the data collection procedures which will be used to investigate the different variables, how they are selected, developed, and used, and their reliability and validity, and then
- 5) a description of the sample and subjects of the study, the procedures used to select them and, finally, the type and form of data collected.

4) *The data analysis*

This component reports either *on the statistical techniques* used for analyzing the data or, in the case of *qualitative analyzes*, on how the data are analyzed and the categories arrived at, together with a description of the ways in which the data are validated.

5) *The discussion*

The discussion component of the research report consists of: 1) *a summary statement of the research results as obtained from the previous component*, 2) *a discussion of their meaning in a broader context*, and 3) *going beyond the results toward an interpretation in which the results are put in a broader perspective.*

This includes the contribution of the results to the general area of research, their implications, and whether they can lead to recommendations and suggestions for further research.

6) *The bibliography*

This part contains the sources and references which a researcher uses and consults while conducting the research and *the appendices* include additional material used, such as samples of the data collection procedures, tests, raw data, copies of permission to use instruments, or anything which may be of significance to the readers but is too detailed to be included in the body of the research report.

8.3.3 Closing the research cycles?

Research is cyclical; it is recurring sequence of events. When we first begin the research, we have *a purpose for doing it*: 1) *there is a topic, a problem, questions or hypotheses*. We realize that different types of problems require different ways of

seeking solutions. 2) We *review the literature* and contextualize the research problem within a larger body of knowledge. 3) We *design and plan the research* according to the type of problem. 4) We *select the appropriate procedures for collecting the research data*, and then apply various techniques to analyzing the data and obtaining the research results. 5) Lastly, we *summarize the results and interpret* them within the context of the problem as it is posed at the outset. Closing the research cycle means that the interpretation of the results leads to the researcher back to the starting point as the notion illustrated in Figure 8.1:

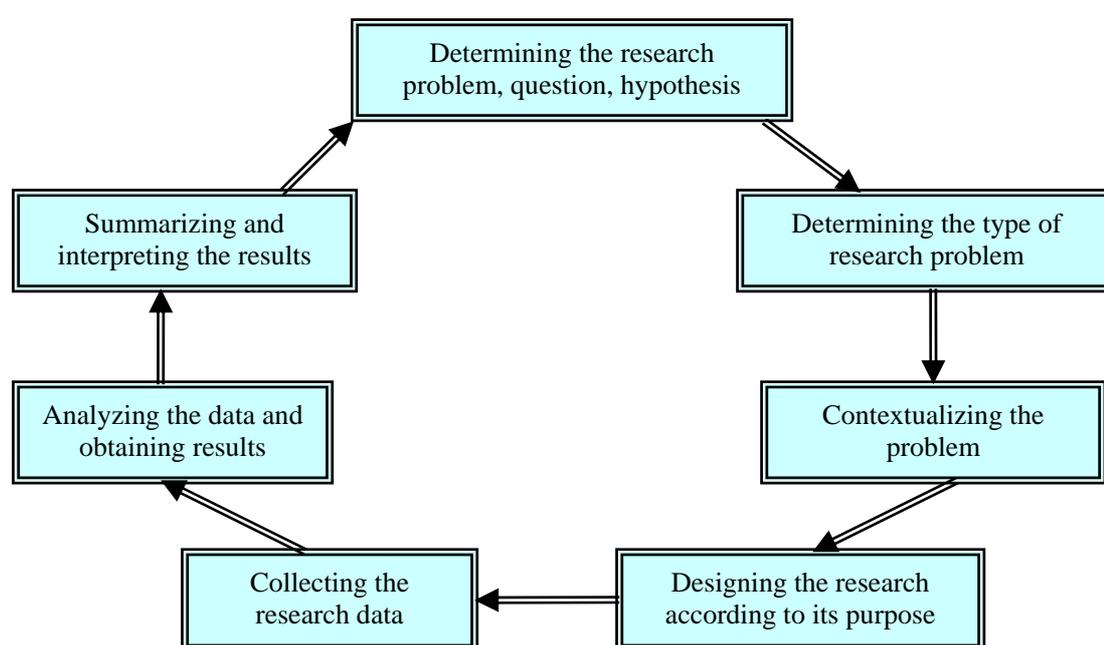


Figure 8.1: The research cycle

However, the nature of research is such that the more answers are obtained, the more questions arise. Curiosity, *in second language acquisition* as in other disciplines, leads researchers to more problems, more questions, and more areas of research. Can we therefore ever consider that the research cycle is ‘closed’?

In social science research results need to be replicated. Only when the same results come up time to time and again the researcher can have confidence in the findings as in the below aspects:

1) Replication

Replication of the research is a way of conducting research for the purpose of verifying and confirming research results. Here, too the cycle does not end, but rather the results of one study lead to further research.

Another common phenomenon in research with human beings is that similar research problems generate conflicting and contradictory results. Such results have been found, for example, in research on age and L2 acquisition, the order of the

morpheme acquisition, the effect of certain teaching methods on achievement, the effect of bilingualism and bilingual education on learners.

2) *Mata-analysis*

Meta analysis takes the results obtained from a number of research studies on the same problem, synthesizes, summarizes, and combines them in order to arrive at more conclusive answers about the problem (Hedges and Olkin, 1985). Research studies require certain properties in order to be included in the analysis, that is, an acceptable sample size and similar research designs.

Although there are a number of areas in L2 acquisition research that have produced conflicting results, there have been few meta-analysis studies: -

2.1) the studies on the effectiveness of bilingual education, and

2.2) the studies that produced conflicting results on the impact of bilingual education with an attempt to arrive at more conclusion findings.

3) *Secondary analysis*

It is another way of continuing the research cycle. In this approach a researcher returns to the data that have already been analyzed and re-analyzes them in a different way. This analysis often leads to new and different findings from those obtained in the first analysis.

The procedures of *replication, meta-analysis, and secondary analysis* all show that the research cycle is an on-going and continuous process in which answers to questions may raise new ones.

There are, then, many different approaches and directions for carrying out research in second language acquisition. No one method is preferable and no single approach will be sufficient. In order to acquire more knowledge in this field we need to combine and blend different approaches. The result will be a broader perspective and a more comprehensive insight. Into the complex phenomenon of how people learn second languages.

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Trainee's Self-evaluation

Directions: After studying the section of reporting, summarizing, and interpreting the ELCR, evaluate yourself about the lessons learned. Question yourself and write in brief to check your understanding. If the lessons are still in doubt, return to the lessons learned.

1) Reporting and summarizing

1.1) Quantitative research.....

1.2) Qualitative
 research

2) Interpreting the results

.....

2.1) Conclusion

2.2) Implications.....

2.3) Recommendations.....

3) Reporting

research

3.1) Types of reports

3.2) The components of the research report.....

**Self-development for Remedial Training Model: Module 8 Reporting,
Summarizing, and Interpreting the Results**

Directions: *This section aims to show the answers from the post-test for the trainees to check. If you get the incorrect answers, revise the content of the ELCR before you study the next module: Follow the suggestion in each item.*

Item 1: The correct answer is B.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 8, and then answer the question again.

- After the data have been analyzed and resulted obtained, the last phase in the process is to

Item 2: The correct answer is D.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 8.1, and then answer the question again.

- The quantitative research is usually illustrated or presented in/by

Item 3: The correct answer is A.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 8.1, and then answer the question again.

-The qualitative research is usually reported by the way of

Item 4: The correct answer is C.

Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 8.2, and then answer the question again.

- Interpreting the research results includes

Item 5: The correct answer is D.

Do you have the correct answer? [] Yes [] No

If you have an in correct one, return to revise Section 8.3, and then answer the question again.

-Reporting classroom research includes.....

Item 6: The correct answer is C.Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 8.3.2, and then answer the question again.

-The part of the research report which contains the sources and references is

Item 7: The correct answer is B.Do you have the correct answer? [] Yes [] No

If you have an incorrect one, return to revise Section 6.4, and then answer the question again.

-The research cycle for an on-going and continuous process in the classroom research in L2 acquisition includes

*Now you have finished your lessons on studying
English language classroom research.*