

Research in Foreign Language Education

Silvia Pokrivčáková et al.



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Introduction

Foreign language education (FLE) research is a dynamically growing and greatly interesting branch of contemporary educational research. As stated later on within the monograph, its main objective is to “to create an explanatory platform for the objectivised knowledge on theories of foreign language acquisition, learning and teaching” and, at the same time, to provide pedagogical theory and practice with information and evidence necessary for better decision-making in everyday pedagogical situations.

Despite growing immensely, only several summarizing books focused on FLE research have been published and certainly none of them have been focused on FLE research in Slovakia. This volume’s ambition is to help close the loophole.

The first study in this publication entitled “**Latest Developments in Foreign Language Education Research in Slovakia**” outlines the general framework of the whole publication. It summarizes the general objectives of FLE research, its current and most contemporary topics, publishing platforms, and common research methods. It also provides a closer look at contemporary FLE research in Slovakia.

As its title suggests, the second study “**Observation in Foreign Language Education Research**” by **Eva Reid** introduces the theory of the observation method and discusses its application in FLE research. It also analyses a selection of recently published studies which used the observation method in their research. The author traces the occurrence of and types of observation methods and critically compares the selected studies.

The use of focus groups as a means of qualitative research in FLE is the topic discussed by **Elena Kováčiková and Renáta Prokeinová** in their study “**Focus Group In Educational Research**”. Later, they analyze three research projects where focus groups were used as the principal research method.

Silvia Hvozdíková’s study entitled “**Case Study in Applied Linguistics and Educational Research**” scrutinizes the case study method and its use in

qualitative FLE research. It highlights both strengths and weaknesses of the method with the important conclusion pointing to the suspicion that the method is neglected in Slovak FLE research.

The less often used method of diary studies as an introspective technique in FLE research is analyzed in the paper by **Božena Horváthová** **“Diary Studies as a Research Tool in Investigating Language Learning”**. After the theoretical description of the method (its possible objectives, the different variations of diary studies, formats of journals, and the principles of conducting such research), the author comparatively analyzes a set of selected studies published in renowned journals during the period of 2000-2011.

The next study by **Karina Turčinová** **“Measurement of Text Difficulty and Didactic Effectiveness of Didactic Texts”** focuses on the analysis of selected parameters measured in teaching texts, especially the measurement of their difficulty and the measurement of their „didactic effectiveness“. The theory is supported by concrete examples of various research studies conducted mostly by Czech and Slovak researchers.

After the general characterization of using the experimental method in FLE research, **Zuzana Rebičová** in her study **“Experiment and its Use in the Process of Foreign Language Research”** discusses its application in studying effects of ICT in e-learning environments.

The experimental method is the topic of the last study **“Experiment in Vocabulary Acquisition and Development Research”**, as well. Its author **Zuzana Fischerová** here synthesizes the recent findings of experimental research into vocabulary learning, acquisition and development. Later the author studies good practice and trends as presented in selected academic articles in FLE journals.

The editor and authors would like to express their thanks to both reviewers of the volume Zuzana Straková and Katerina Veselá for their support and highly valuable comments and suggestions. Finally, the book could not have been published without proofreading carried out by Niall Anthony Kenny. We immensely appreciated their hard work.

Authors

LATEST DEVELOPMENTS IN FOREIGN LANGUAGE EDUCATION RESEARCH IN SLOVAKIA

Silvia Pokrivčáková

Foreign language education (FLE, here understood synonymously with such terms as foreign language pedagogy, second language pedagogy, second language education, etc.) is an interdisciplinary branch of pedagogical science, integrating knowledge of pedagogy, linguistics and other disciplines (social studies, anthropology, psychology, cultural studies, literary studies, cognitive sciences, etc.) closely related to the processes of acquiring, learning and teaching foreign languages. At the same time, foreign language education may be considered as a relatively independent field of applied linguistics (cf. Hall, Smith, Wicaksono, 2011, pp. 127-220).

The aim of this chapter is to discuss the general context of research in FLE (objectives, research topics, platforms, methods, etc.), followed by a brief overview and evaluation of the contemporary situation in FLE research in Slovakia.

FLE Research

As Higgins (1996, p. 1) states, “research is an act with an objective. The act entails a person (the researcher) searching for, enquiring about, investigating, exploring, repetitively, carefully, closely, some specified matter (the topic, the subject of the research). This matter may be an event, a fact, a cause, a relation, an elucidation, a demystification, a pattern, a meaning. So in any research: a person searches for a clue”. Accordingly, **FLE research** deals with a wide range of events, facts, causes, relations, elucidations, demystifications, patterns and meanings. Its purpose is to create an explanatory platform for the objectivised knowledge on theories of foreign language acquisition, learning and teaching. At the same time, it should provide all subjects involved in the educational practice (school policy makers, school managers, teacher trainers, teachers, students, etc.) with

information necessary for better decision-making in everyday pedagogical situations.

Even though it would be useless and nearly impossible to name all currently relevant research topics, some should be named because of their dominance and attractiveness to contemporary FLE research. Johnstone's annually published reviews of research in language teaching, learning and policy might serve here as a leading thread. Based on his longitudinal studies and analyses, Johnstone structures his reviews according to the following, in his opinion since 2002 most prominent, topics in FLE research:

- acquisition (processes of implicit and explicit learning of foreign languages, comprehensible input and output in foreign language);
- foreign language learning strategies (beliefs and behaviours, assessment of learning, anxiety-reduction, autonomy, learning styles, attitudes);
- affective characteristics of a learner (mostly motivation),
- younger learners;
- components of foreign language proficiency (aptitude, teaching and learning vocabulary, listening, speaking, reading, writing, grammar);
- building of intercultural understanding, diversity, literacies and identities;
- computer-mediated language learning (CALL, blended learning, multimedia);
- macro issues of policy, planning and provision, immersion and content-based instruction (Johnstone, 1992, 1993, 1995, 1996, 1997, 1999, 2000, 2001, 2002, 2003, 2004, 2006, 2008, 2009).

As far as the choice of foreign language is concerned, it is obvious that the majority of studies still deal with teaching English as a foreign/second language. Other languages are represented in far lesser proportions, though their number has been continually growing. The latest trends have also shown that the centre of foreign language education research might be moving from Europe and the U.S.A. to Asia (China, Taiwan, Japan).

Platforms of FLE research

FLE research is mostly institutionalized at universities and specialized research centres (e. g. Language Resource Centers administered by the International Foreign Language Education Service of the U.S. Department of Education). The products of their excellence are published either in

monographs, conference proceedings or in journals in both applied linguistics and educational research.

Some of the refereed and most prestigious peer reviewed international journals (both printed and on-line), publishing results of FLE research are (in alphabetical order, no meaning of priority is implied): *Educational Research*, *Education Review*, *European Journal of Education*, *International Review of Applied Linguistics in Language Teaching*, *Journal of Language and Learning: An International Journal for Language and Education Studies*, *Journal of Language Teaching and Research*, *Journal of Second Language Teaching & Research*, *Language Learning: A Journal of Research in Language Studies*, *Language Teaching Research*, *Reading in a Foreign Language*, *Second Language Research*, *Studies in Second Language Acquisition*, *The Language Learning Journal*. Their editorial boards consist of internationally acknowledged experts.

Although the monographs analysing and evaluating the development of FLE research are still absent (being partially substituted by annual or biannual reviews of the latest outcomes in FLE research, such as Johnstone's reviews already mentioned), a wide range of publications guiding and helping novice researchers have been published in the last twenty-five years (Allwright, Bailey, 1991; Brown, 2001; Brown, Rodgers, 2002; Burns, 1999; Denscombe, 2007; Edge, Richards, 1993; Gass, Mackey, 2007; Hinkel, 2005; Larsen-Freeman, Long, 1991; Mackey, Gass, 2005; Nunan, 1992; Pawlak, 2011; Rietveld, van HOUT, 1993; Seliger, Shohamy, 1989; Scholfield, 1995; Tarone, Gass, Cohen, 1994, and others).

FLE research methods

The methodology of research in FLE is basically derived from the various methods and procedures of general educational research. The contemporary methodology of educational research offers a rich scale of high expertise sources (Allwright, Bailey, 1991; Brown, 1988, 2001; Brown, Rodgers, 2002; Cohen, Manion, Morrison, 2000; DeMarrais, Lapan, 2004; Dornyei, Taguchi, 2010; Freeman, 1998; Gall, Gall, Borg, 1999; Gay, Asirasian, 2000; Hopkins, 1998; Johnson, Christensen, 2000; Larsen-Freeman, Long, 1991; Nunan, 1992; Sanz, 2005; Seliger, Shohamy, 1989; Scholfield, 1995; Tarone, Gass, Cohen, 1994, etc.). Many sources are available both in Slovak and Czech (Chráska, 2003; Ferjenčík, 2000; Gavora, 2000, 2008, 2010; Juszczuk, 2006; Komárik, 2002; Maňák, 1994a, 1994b; Maňák, Švec, 2004; Ondrejkovič, 2007; Pelikán,

1998; Silverman, 2005; Švaříček et al., 2007; Švec, 1998 and others). Statistical methods suitable for educational research are discussed in other publications as well (Butler, 1985; Rietveld, van Hout, 1993; Plewis, 1997; Brown, 1998; Králík, Hartman, 2000; Lašek, Chrzová, 2003, etc.).

Since, as mentioned above, FLE integrates various sciences (pedagogy, psychology, linguistics, social studies, etc.), research in FLE incorporates all the research procedures usually applied in the mentioned sciences.

Traditionally, methodology of research (including FLE research) distinguishes two basic designs: quantitative and qualitative. It is a dichotomy followed by the chapters of this publication, as well.

Quantitative research depends on quantifiable evidence and relies on statistical analysis of data. Its validity, reliability and ability to state general conclusions depend on a relatively high number of studied cases (usually several hundred). Qualitative research relies on the understanding of pedagogical phenomena through direct observation, communication with participants, or analysis of texts. It values subjective accuracy over generality.

While in the 1990s, research methods of predominantly quantitative design were more valued for their capability to gain higher degrees of objectivity, validity and reliability, nowadays the interest of researchers seems to be shifting to research methods of predominantly qualitative design. Recently, however, some authors see survey research methods (e.g. questionnaires) as an independent research design.

All research methods “can act together in all possible combinations to various degrees” and that the borders between the methods of quantitative and qualitative research are in fact vaguely and artificially built (Brown, 2004, p. 489). Research methods are seen as an interactive continuum made of degrees, quantitative experiment being a border point on one end of this continuum and a qualitative case study being a border point on the other end (ibid., pp. 488-489).

Tab. 1: General classification of research methods in FLE

Predominantly quantitative research methods:	Predominantly qualitative research methods:
<ul style="list-style-type: none"> ● variety of surveys (questionnaire, interview); ● experiment; ● quasi-experiment; ● sociometry; ● tests; ● scaling; ● verbal reports; ● quantitative content analysis; ● cluster analysis; ● regression analysis; ● numerical methods such as mathematical modelling, etc. 	<ul style="list-style-type: none"> ● action research; ● direct observation; ● participant observation; ● case study; ● ethnography; ● historiography; ● qualitative debate; ● qualitative observation; ● qualitative content analysis of written documents; ● in-depth interviews; ● unstructured interviewing; ● qualitative experiment (Maňák, 1994a); ● focus groups (Morgan, 2001); ● analytic induction; ● archival research; ● qualitative content analysis; ● Life history; ● Longitudinal study; ● Morphological analysis,, etc.

FLE research in Slovakia

It is a sad fact that the main changes in FLE in Slovakia have always been enforced not for the need of the learners, but because of the political situation in the country. While up to 1989 the dominant position among foreign languages was occupied by Russian (with secondary roles played by German and French), after the “Velvet Revolution” in 1989 the scope of languages and numbers of their learners have changed dramatically. The dominant role has been taken over by the English language, followed by

German, French, Spanish, Italian and Russian (these are the only 6 languages formally allowed to be taught as foreign languages in Slovakia nowadays).

Similar changes have been consequently reflected in the field of foreign language education and research. The issues of English language teaching methodology have replaced those of Russian language teaching methodology in their previously prominent position. The changes in foreign language education research were not so obvious and dramatic, even though they started appearing rather soon after the political change. Three, mutually interrelated conceptual shifts can be traced since that time:

- a) the shift in philosophical and theoretical background;
- b) the shift in research topics;
- c) the shift in the orientation/languages.

Philosophical and theoretical background

By comparing information sources used as a theoretical basis for FLE research before 1989 and after, an obvious shift from the sources affected nearly exclusively by Marxist pedagogy and linguistics to the sources reflecting diverse theories (mostly of Western-European and Anglo-Saxon origin) can be witnessed.

Topics

The traditional approaches to teaching foreign languages (GTM) and teacher-centred methods that had been dominant in the past were thus replaced by newer, more modern approaches and methods (especially by the communicative approach and direct method techniques, as well as student-centred methods). As a consequence, FLE assumed the study of new topics (autonomy of the learner, learning strategies and styles, roles of the teacher, cooperative learning, etc.) as well.

On a closer look at FLE studies published by Slovak authors in the last 10 years, the following topics may be marked as the most attractive for the contemporary FLE research in Slovakia:

- various aspects of language acquisition (including studying the acquired knowledge of grammar);
- benefits and risks of teaching foreign languages to very young and young learners;
- studying the characteristics of foreign language learners (learning strategies, learning styles, motivation, attitudes, aptitude, etc.);

- bilingualism and studying various aspects of bilingual education (including special issues of CLIL and code-switching in the classroom);
- roles of ICT and multimedia in FL acquisition (CALL, blended learning, relationships between ICT and the learner's autonomy, the balance between so-called "contact" and on-line instruction, etc.);
- effective development of various components of FL proficiency (development of vocabulary, communicative skills and grammar);
- evaluation and assessment of FL learning outputs;
- foreign language learning as building intercultural and social competences (impact of cultural studies, psycholinguistics, sociolinguistics and pragmatic linguistics on FLE);
- transferring the latest findings of corpus linguistics into language education, etc.;
- impact of the latest cognitive sciences (neurodidactics) on foreign language education.

Surprisingly, there are topics that have not been dealt with due to their nature and due to the educational context in Slovakia, and therefore they could be of a great interest for researchers:

- evaluation of early start programmes;
- confrontation analysis of mother language proficiency and foreign language learning;
- analysis of most frequent mistakes made by Slovak learners caused by mother-tongue interference;
- non-native teacher education.

Orientation/Languages

Since 1995 English language teaching has taken the prominent position among other foreign languages. Consequently, FLE research focused on English language acquisition and teaching represents more than 75% of all studies in the field.

Still, it is necessary to emphasize that changes in research were never so dramatic as in the organization of foreign language education and real teaching in classes. Despite the rapid development of foreign language education in the last 20 years, its research has retained some weaknesses (the following statements are the results of the author's everyday observance and experience, not supported by any empirical data yet):

- a) The structure of research topics in Slovak FLE research is uneven: while some topics seem to be “overstudied” (teaching techniques, development of particular communicative skills and competences), some are studied insufficiently or even ignored (evaluation of early start programmes, error analysis, specifications of non-native teacher education, etc.).
- b) Primary research in FLE is very rare.
- c) A major part of the research has the character of secondary research based on the analysis of previously published sources (mostly of foreign origin; with the exception of FLE research itself, where everybody knows everybody, Slovak FLE researchers only rarely follow the findings of research in Slovak educational research or research in other related areas, such as psychology, linguistics, etc.).
- d) Slovak FLE research misses the self-reflective, objective analyses of its state and quality despite the fact that such analyses are necessary prerequisites for its further systematic development.
- e) There is a lack of research centres that would coordinate, organize, and collect research results obtained by various research teams. FLE research in Slovakia is conducted either by individual faculties training teachers of foreign languages (there are 11 such faculties), or by specialized institutes (The Slovak Pedagogical Institute in Bratislava, partly also The Institute of Child’s Psychology and Pathopsychology in Bratislava), or (much less frequently) by in-practice teachers as part of their qualification education or project activities. There is no national institution collecting and assessing research results. Such activity would be of much help in providing information, enforcing cooperative relationships, and creating more diverse research teams capable of solving more complex research problems. Without it, it is very difficult to get reliable information about academic research conducted by PhD students, or about research carried out as part of qualification theses of various types (attestation, *rigorosa*, doctoral, and habilitation theses). Primary research findings arrived at in academic research have remained publicly unknown and thus unable to affect the development of FLE research.
- f) There is no specialized Slovak FLE research journal that would act as the unifying medium for information transfer (as mentioned in the above paragraph). Research projects are mostly prepared by individual

researchers according to their personal preferences, not by needs formulated by pedagogical practice. The consequence is then the production of isolated and fragmented research results.

- g) Research projects conducted by faculties and institutes are funded mostly by several grant agencies, e. g. Cultural and Educational Grant Agency (KEGA) and Scientific Grant Agency (VEGA) at the Slovak Ministry of Education. There are only a few research projects initiated by pedagogical practice and funded by external subjects. One of the consequences is the lack of compliance between the research and the real needs of potential recipients of research results (a decision-making sphere, school managements, teacher trainers and teachers).
- h) Internationally funded research projects are very rare.
- i) Slovak FLE research is lacking contributions from in-practice teachers (e.g. in the form of action research).

The analytical probe into FLE research in Slovakia

To illustrate the status of FLE research in Slovakia, I originally planned to collect the relevant number of studies on FLE research with a view of analysing their content and the methodological procedures used in the studies, so as to be able to identify relatively general trends in topicality as well as dominant research methods and techniques.

The problem of the already mentioned stratified sources quickly emerged. FLE research studies in Slovak journals on general educational research (*Pedagogika*, *Pedagogika.sk*, *Pedagogická revue*, *Pedagogické spektrum*, *Technológia vzdelávania*, etc.) were so rare that it was not possible to undertake cohesive data analysis or identification of trends.

To form a cohesive corpus of material, I decided to analyse 139 research papers collected in eight refereed research proceedings Foreign Languages and Cultures at School 1 – 8 (2002-2011). It is the only series of continually published proceedings in Slovakia, focused on foreign language education, foreign language education and methodologies of teaching foreign languages (English, German, Russian, Spanish, Italian and French), and it has been annually published since 2002.

Although each of the proceedings contains various types of texts (including workshop reports and book reviews), only papers on foreign language education written exclusively by Slovak authors were analysed.

The authors of the analysed papers represented all groups of subjects involved in FLE research: university teachers and teacher trainers from all faculties participating in teacher training programmes (114), PhD students conducting academic research for their theses (8), representatives of the State Pedagogical Institute in Bratislava (2), The Institute of Child's Psychology and Pathopsychology in Bratislava (2), representatives of methodological-pedagogical centres (2), school inspection offices (4), and in-practice teachers (7).

Tab. 2: Number of research papers in the analysed sample

Proceedings	Number of analysed papers
CJŠ 1	12
CJŠ 2 (2004)	28
CJŠ 3 (2005)	20
CJŠ 4 (2006)	14
CJŠ 5 (2007)	26
CJŠ 6 (2009)	14
CJKŠ 7	8
CJKŠ 8	16
Total	139

Dominant topics

To identify the dominant topics of the research papers in the selected sample, content analysis based on word-frequency analysis was used. The original chart of topics consisted of 50 items. It was later reduced only to the items occurring in the analysed texts (see the first column of Tab. 3).

The results showed that:

- Most of the research papers, traditionally, dealt with research into selected teaching methods and techniques (e.g. project techniques, drama techniques, etc.) and various aspects of developing various components of teaching foreign languages (teaching vocabulary and grammar, developing all communicative skills, etc.).
- A high proportion of studies focused on the development of intercultural and social competences in the context of foreign language education.

- The latest changes in the foreign language education system in Slovakia (the start of compulsory foreign language education moved to the 3rd grade of primary education) were reflected in the high number of studies on teaching foreign languages to young learners.

Tab. 3: Structure of research papers in the studied sample according to research topics.

Topics	1	2	3	4	5	6	7	8	Total	%
Organization of language education, political context			3		2				5	3.59
Teacher training		1	4	2	1			1	9	6.47
Learners' characteristics			3		2	1	1	2	9	6.47
FLT to young learners		6*	1	1	6		1		15	10.79
Components of TFL (skills, grammar, vocabulary)	2	5	2	3	3	2	1	1	19	13.67
Teaching methods and techniques		6	2	5	4	3	3	5	28	20.14
Teaching materials (textbooks)	4*	1		1					6	4.32
ICT and multimedia	1	1	2	1	2	2	1	1	11	7.91
Cultural and social context of TFL	3	3	3		5	5	1	3	23	16.55
Literature in TFL	2	5	1	1	1			1	11	7.91
Language pedagogy research						1		2	3	2.16
Total	12	28	21	14	26	14	8	16	139	100.0

*A relatively high score for this topic in this particular year was a result of the fact that the topic (FL textbook evaluation/teaching FL to young learners) was defined as a priority topic of the conference Foreign Languages and Cultures in that year.

Character of the papers

More than the thematic coverage, the quality of FLE research in Slovakia can be testified by the character of papers collected in the analysed proceedings. Issues of the quality were not considered in this study, since all papers had been reviewed by expert reviewers prior to being publishing.

Instead of the traditional classification of research papers (argumentative, analytical papers, definition papers, comparative, interpretative, cause and

effect papers, reports), the following categorization was used for the purpose of the present analysis:

1. **Analytical and interpretative papers** – present primary research findings, analyses of new data, including interpretation of results, collecting and interpreting entirely new data gained via any research method;
 2. **Theoretical-descriptive papers:** introduce mostly secondary research findings, summarize ideas or findings of other authors, introducing them to a new audience, or rarely mechanically applying them to the context of the Slovak educational system; with a summation of the findings and a suggested framework for further study on the issue;
 3. **Methodological-instructive papers:** focus on practical teaching activities, mostly introduce new teaching techniques with their theoretical background, followed by practical tips and instructions for their use in practice; practical instructions how to use new knowledge in the classroom;
 4. **Retrospective papers and reports:** outline a case study situation, inform about either running or successfully closed projects, recapitulate historical development of trends, conceptions, or institutions.
- The structure of papers in the studied sample is shown in tab. 4.

Tab. 4: Structure of the research papers in the studied sample according to their character

Proceeding No.	1	2	3	4	5	6	7	8	Total	%
analytical- interpretative	1	1	1	1	0	4	2	1	11	7.91
theoretical- descriptive	8	15	14	4	11	8	2	8	70	50.39
methodological- instructive	2	7	1	4	8	1	4	6	33	23.74
retrospective evaluations	1	5	5	5	7	1	0	1	25	17.98
Total	12	28	21	14	26	14	8	16	139	100.00

Results:

The results arrived at by the analysis of 139 research papers published in the only continually published proceedings in FLE provided a very good illustration of what had been predicted before:

- More than a half of the research papers were of a theoretical descriptive character (based on literary research of secondary sources).
- The second in number were methodological-instructive papers (nearly 25% of the papers in the sample).
- Analytical-interpretative papers, introducing results of primary research, were very rare (11 out of 139 papers, which is less than 8%). All 11 papers came from qualitative research based on survey methods (9 out of 11 published findings gained by questionnaires, the rest by quantitative content analyses).
- In-practice teachers provided exclusively reports on running projects without theoretical background or critical analysis. This might once more point to a rather serious weakness of FLE methodology and research in Slovakia - which it seems, does not sufficiently prepare teachers for research activities.

FLE research and teaching practice

Ideally, FLE research should be based on the study of problems occurring in everyday foreign language teaching practice, on looking for and finding the best explanations and most effective solutions that could help teachers, teacher trainers, school managers and other subjects to improve their work and set best-practice.

However, the reality is somewhat different. Paraphrasing Eckerth (*undated*), FLE research is institutionalized at universities and research centres, while foreign language teaching takes place in a very different space: state and private schools, colleges and institutions of higher education. "All too often, then, these domains constitute separate spheres of reality, which can be characterised in terms of different beliefs and convictions, types of knowledge, value systems, action patterns, linguistic conventions and discourse practices" (ibid, p. 20). While research is built on abstraction, radical generalization and the effort for strict objectivity and validity, the "teachers' domain" is intuitive and based on actual experience. Ellis (1997) goes even further and distinguishes two different types of knowledge which place researchers and teachers on opposite sides of the same axis. Research

is fuelled by and produces “technical knowledge” which is declarative in expression, explicit in nature and codified in form. It works for generalized statements that would cover as many cases as possible – it provides general information. Teachers, on the other side, need to gain knowledge and skills that would enable them to make quick and effective decisions in particular situations, not general circumstances. Teachers need “practical knowledge” that provide them with explicit and straightforward instructions on how to act. It is the reason why teachers (both pre-service and in-service) usually do not see the need in being trained in research, and conducting academic research is generally considered as one of the most demanding and least popular parts of teacher training and teacher qualification education.

To overcome the said gap between the research and teaching reality is one of the most important challenges facing educational research.

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Abstract

The aim of this chapter is to discuss research in foreign language education including its general objectives, topics, and frequent research methods in both international and Slovak contexts. To illustrate the status of FLE research in Slovakia the analytical probe into FLE research in Slovakia follows. The results were arrived at through the analysis of 139 research papers published by Slovak authors. The results showed the clearly dominant occurrence of theoretical descriptive papers based on literary research of secondary sources (more than 50% of published and analyzed papers), followed by methodological-instructive papers (nearly 25% of the papers in the sample). Analytical-interpretative papers, introducing results of primary research, were very rare (11 out of 139 papers, which is less than 8%). The results thus pointed to a rather serious weakness of FLE research in Slovakia – the lack of primary research and the dominance of papers based on adopted ideas applied to the Slovak educational environment.

Keywords

research in foreign language education, research methodology, primary and secondary research, categorization of research papers, FLE research in Slovakia

Extent: 38 253 characters

OBSERVATION IN FOREIGN LANGUAGE PEDAGOGY RESEARCH

Eva Reid

The method of observation is a very frequent research method in education, but also in linguodidactics. It is because observation is the most natural research method, as it offers an opportunity to gather the “life” data from naturally occurring situations. Researchers work with first-hand (direct) information rather than second-hand accounts. The observation’s unique strength has the potential authenticity and validity of the data (Cohen, Manion, Morrison, 2007). Observation of everyday life is random, incidental, unsystematic, missing particularities, being influenced by external forces or subjective circumstances, and is often subjective. In contrast, observation as a research method has to be objective, intentional, planned, purposeful and systematic to gain accurate and reliable data (Gavora, 1998 and 2001). Observational data are less predictable and offer a fresh outlook on the subjects of research, next to the data collected from questionnaires or tests.

According to Gavora (2001) through observation we focus on *people’s activities* or *behaviour*, but also on *subjects* and *physical settings* in which the observed situations occur. Cohen, Manion, Morrison (2007) distinguish observation of:

- *facts* (number of teaching aids used by a teacher, information sources used by learners, etc.)
- *events* (amount of teacher-student interaction, amount of role-plays in the class, etc.);
- and *behaviour* (friendliness of the teacher, aggressive behaviour, unsociable behaviour, etc).

Morrison (1993) divides observation into categories of collecting data:

- *physical setting* (physical surroundings and its organization);
- *human setting* (organization of people, groups or individuals being observed in foreign language classrooms);
- *interactional setting* (planned, unplanned, formal, informal, verbal, non-verbal);

- *programme setting* (design of a foreign language course, teaching styles of foreign language teachers, etc.).

Gavora (1998) states that first of all the observers need to decide on:

- *observation evidence* (cause or intention for observation);
- *subject of observation* (people, subjects, events, physical settings);
- *time span of observation* (when, how long, how often the observation should take place and last);
- *manner of observation* (which observation techniques should be applied, who is/are the observer/s).

The researcher should be able to understand from the collected data the situation being described by observation. The application of only one type of observation is insufficient for language pedagogy research, because of the great variousness and heterogeneity of the educational process, environment and subjects and it would not cover all cases of observation. Patton (1990) distinguishes three types of observation:

- *highly structured observation* (the researcher knows in advance what he/she is looking for, has decided on hypothesis, collects data to conform or refute the hypothesis);
- *semi-structured observation* (the researcher has an agenda of issues in a less systematic order);
- *unstructured observation* (the researcher is far less sure on what he/she is looking for, he/she observes the situation before deciding on its significance for the research).

Gavora (1998) classifies two contrasting methods of observation. At one end is the *unstructured observation* (a technique of field notes, where chronological and detailed notes of the lessons are written down) and the other end is *structured observation* (an observation scheme is prepared with exact categories, the researcher has an agenda of issues in systematic order).

There are degrees of participation in observation. Cohen, Manion, Morrison (2007) offer a well known classification of researcher roles in observation. At one end is the *complete participant* (the researcher takes on an insider role in the group being studied and might not declare he/she is a researcher), moving to the *participant-as-observer* (documents, records, parts of the social life of participants are available for research purposes), then *observer-as-participant* (is known to the group as a researcher and has less intensive contacts with the group), finally to the *complete observer*

(participants do not realize that they are being observed – covert research). The move is from complete participation to complete detachment. The role of complete observer is characterized by one-way mirror, video recording, audio recording, while the complete participation demands researchers to take on membership roles (overt or covert). The mid points attempt to balance involvement with detachment, familiarity with strangeness, closeness with distance. Hammersley and Atkinson (1983) warn that the involvement in complete participation and the role of participant-as-observer might result in a degree of subjectivity. There is a risk of “going native” with complete participation, where the researcher adopts the values, norms and behaviours of the group, becomes more a member of the group and ceases to be a researcher. There is also a risk of revealing the identity of the complete participant. The disadvantage of the complete observer is that there is no contact with the observed and interference would be risky.

Researchers need to decide what to focus on, whether on greater or smaller categories. Gavora (1998) distinguishes *macro*, *mezzo* and *micro* categories. The macro-category captures global reality (the teacher announces to the pupils the aim of the lesson, the researcher observes only the presence of this event at the lesson) and the micro-category deals with more detailed events (contents of the aim, partial aims, evaluation of the aims, etc.). Wilkinson (2000) provides a distinction between *molecular* and *molar* units. Small units are molecular (gestures, short actions, short phrases of conversation). These give us very specific data sometimes taken out of context, which can cause the loss of validity. Molar units deal with larger units, the size of which is determined by the theoretical interests of the researcher. Cohen, Manion, Morrison (2007) suggest that all the data should be comprehensive enough to enable the reader to reproduce the analysis that was performed.

Another differentiation of observation is whether the observation is performed *directly* or *indirectly*. Direct observation involves the presence of the observer, he/she should be placed in the back of the classroom not to disturb the lesson. Indirect observation can be executed by the means of audio-visual recordings (Gavora, 1998). Direct observation has the disadvantage of collecting partial information, recording is reduced to a few events or a low frequency of events. Audio-visual data collection has the advantage of overcoming the partialness of the direct observation. It has the capacity for the completeness of analysis and comprehensiveness (Morrison,

1993). According to Gavora (1998), there are also disadvantages of the indirect observation, as the observers are lacking contact with reality, not being able to experience and feel the atmosphere of the situations. Gavora (ibid., 1998) recommends the combination of direct and indirect observation.

Most observations in language pedagogy take place in *natural settings* - in schools, classrooms, libraries, school language laboratories, etc.. For certain psychological purposes, an *artificial setting* is set up to provide greater observational power to the researcher. For example a one way mirror serves such purposes when the researcher can observe the pupils unnoticed (covert research). *Covert research* raises the ethical issues of violating the principles of informed agreement, invading the privacy of the subjects, treating the participants instrumentally. While covert research is necessary to gain access to marginal and stigmatized groups (drug users/suppliers, political activists, child abusers, etc.), it is rarely used in language pedagogy research. The advantage of covert research is that it overcomes problems with reactivity: individuals might change their natural behaviour when they know that they are being observed (Cohen, Manion, Morrison, 2007). *Overt research* is when the observer is present and known to the participants. The researcher always influences the observed individuals. The participants are aware of the researcher's presence and it always alters their behaviour. Some participants "act their roles" when they are observed, for example the teachers act more pleasant than usual, use more teaching methods and materials than usual, pupils are more active than usual, etc. On the other hand, some participants have a block and are very quiet and inactive when being observed. These aspects also influence the results of the observation (Gavora, 1998).

There are many issues to be aware of by observation. These issues influence the validity and reliability of the observation. *The selective attention* of the observer is concerned with subjectivity such as what to look at, how to look, when to look, what we think we see, what is on our mind at the time of observation, what our interests are, etc. *Reactivity* means the participants might change their behaviour if they know they are being observed (they try harder, are more anxious, behave better or worse). When the observer is distracted, it is called the *Attention deficit* and it might cause an oversight of some events. *Validity of constructs* is an issue concerning what counts as valid evidence for a judgement, if the collected data are the real indicators of what we need for the research. *Selective data entry* is concerned with the

personal judgement of the observer, which can affect the data. When the observer does not write all the observations immediately, but wants to write the data after the event, the memory fails to remember everything, neglects and selects only some details. This is called *Selective memory*. *Interpersonal matters and counter-transference* apply to our interpretations, which might be affected by our personal judgements and preferences (what we like and do not like). *Expectancy effects* of the observer might influence his/her observations. The observer knows the hypotheses, findings of similar studies and has expectations of finding certain results. The *number of observers* could influence the observation as they might be inconsistent in their observations (Cohen, Manion, Morrison, 2007).

The worlds of language and education are very rich, complex, full of contradictions, conjunction and disjunction. It is not always possible to capture the issues of enquiry by numerical quantitative research. Some things have to be studied in total rather than in fragments if we want to reach a true understanding. The research should be holistic, describing and interpreting the whole phenomena. According to Lofland (1994), naturalistic methods in research intend to address three major questions: 1. characteristics of a social phenomenon, 2. causes of the social phenomenon, 3. consequences of the social phenomenon. LeCompte and Preissle (1993) describe ethnographic research as being more concerned with description rather than prediction, induction rather than deduction, generation rather than verification of theory, construction rather than enumeration, subjective rather than objective knowledge. Researchers become themselves “human” instruments of research, building on their knowledge using methods of observation, interviews, document analysis in qualitative research. The advantage of being a human instrument is his/her adaptability, responsiveness, knowledge, ability to handle sensitive matters, ability to see the whole picture, ability to summarize, explore, analyze, etc. However Woods (1992) warns against exaggerating the differences between quantitative (testing theories) and qualitative (generating) research. He claims that the contrast between the two is overstated, as qualitative techniques can be used for both generating and testing theories. Similar concern applies to whether or not to have hypothesis in qualitative research. There are advocates of the belief that the theory should be the final point of the research, not the starting one, where the hypothesis has no place in the research. There are also followers of the belief that there is no research that would be theory-free, without the

researcher's own background interest and knowledge which generate research presumptions (Glaser, Strauss, 1967). Meinefeld (2004) indicates that the qualitative research also has the right to use hypothesis (the researcher has to be prepared to modify his/her own presuppositions, declare the extent to which the researcher's prior knowledge has been influenced by the research).

The main features of qualitative research are it takes a long period of time, its intense and it involves a detailed transcription of events. A researcher writes down almost everything that is happening at the time of observation. He/she can make audio or video recordings, which are subsequently analyzed. There are several approved techniques in qualitative research, from which *analytic induction* and the *technique of constant comparison* are the most common (Gavora, 1998).

In the technique of *analytic induction*, the research problem is formed, data are collected from one case and the initial hypothesis is formed based on the initial findings. The researched sample (more people, classes, schools, etc) is expanded and the initial hypothesis is tested. The hypothesis can be modified if negative cases appear. The new hypothesis is tested again until proved satisfactory and there are no more negative cases.

Procedure of analytic induction:

1. assigning a research problem;
2. collecting data from the first case (one person, one classroom, one school);
3. formulating an initial hypothesis based on the data from the first case;
4. expanding the researched sample (more people, classrooms, schools);
5. testing the initial hypothesis with a greater sample;
6. searching for negative cases to prove or modify the hypothesis;
7. formulating a new hypothesis based on the current findings;
8. carrying on with this process until no more negative cases arise;
9. formulating the final theory about the researched matter.

This process is very long and demanding. This process is sometimes simplified by setting a research sample (certain number of people, situations, etc.) and this sample does not change. The advantage of this technique is that it is much quicker, but the disadvantage is the deficiency in accuracy (because the hypothesis accommodates only the set number of participants).

With the *constant comparison technique* the hypothesis is not set. The researcher collects data, categorizes them, focuses on common features,

differences and relationships between them. The researcher forms a theory based on the categorized data, so the hypothesis is formed from the acquired information. Some categories are refined, unsuitable categories are excluded and new categories are added in. The researcher constantly compares the data and categories until he/she finds a satisfactory explanation, develops a theory (Gavora, 1998).

Procedure of constant comparison technique:

1. assigning a research problem and choosing a research sample;
2. searching for common and different features from the collected data, to synthesize, formulate categories (no hypothesis is formulated);
3. obtaining additional data to make categories more accurate. Unsuitable categories are excluded, new categories are added in, the relationship between them is assessed;
4. Formulation of the hypothesis.

Observational techniques (either participant or non-participant) are used extensively to acquire data in real-life situations. Spindler and Spindler (1992) comment on the observations to have contextual relevance, both in the immediate setting in which behaviour is observed and also in further contexts; observations are often repetitive with the aim to establish the reliability of the observational data; instruments, schedules, agenda for interviews and questionnaires should be derived from observations; and any technical devices are advised to use in order to collect as much data as possible. Gavora (1998) suggests that the unstructured observation is a technique where the researchers set the aim, subject, length of observation, but do not follow in advance stated categories. They continuously take the notes, which are relevant for the research. He/she can concentrate on the general picture (interaction, atmosphere, etc.), or more specific data (ways of behaviour, contents of communication, process of solving a problem, etc.). Unstructured observation is flexible, open and it allows approaching reality in a new, untraditional fashion. We use this technique when there is not much known information about the researched matter, or when something is being researched for the first time, or when we want to have a new fresh outlook on the researched matter. Collected data from structured observation in cases like these would have very little operational value. The unstructured approach in observation is fairly quick and easy to prepare, but the collected data take a longer time to analyse. For processing data from unstructured observation we use qualitative data analysis. According to Adler and Adler

(1994), qualitative research allows the researcher to get involved in the complexity of the participants' world – connections, causes, correlations in certain situations. Qualitative research aspires to capture the dynamic nature of events, to seek trends and patterns over a period of time. According to Baker (1994), we can observe the environment, people and their relationships, behaviour, actions and activities, verbal behaviour, psychological stances, physical objects, etc.

Deciding sampling in qualitative research is different to quantitative selection. In quantitative research there is a preference for random sampling. In qualitative selection there are several ways of selecting people, contexts, issues, artefacts or data sources. Generalizability (which is an aim of quantitative research) is not necessarily the goal of qualitative ethnographic research and that's why *purposive (deliberate) sampling* is used. Gavora (1998) explains that by deliberate sampling people with suitable knowledge and experience are picked. The selection of people is always representative, portraying specific environment. The following are a few types of sampling by Cohen, Manion, Morrison (2007). *Convenience sampling* (opportunistic sampling, selecting from whoever happens to be available), *critical-case sampling* (people who possess the characteristics, which are highly significant for their behaviour, cases where all of the factors sought are present), *typical case-sampling* (characteristics possessed by an average typical person or case, the sample is selected from conventional people, cases), *unique-case sampling* (rare, unique, unusual cases), *snowball sampling* (one participant provides access to a further participant based on recommendations. The number of participants expands and it resembles the growth of a snowball). The extension of deliberate sampling is not set statistically like with quantitative research. When the collected data saturate the demand, information is repeated and expansion of a sample is no longer relevant.

According to Gavora (1998), there are three typical ways of collecting data by unstructured observation, depending on whether the observer notes down all the information in sequence or just chooses information selectively. These are: Chronicles, Field notes, and Participant observation.

Chronicles (specimen records, anecdotal records) are used when the observer makes detailed notes of everything happening. The notes serve as basic data for further research. It is important to write down everything in sequence. However, boundaries of the observed situations and the aims of the observation should be set. The researcher does not take part in, he/she is

observing from a distance. He/she should be focusing on external signs of behaviour, should not express his/her opinions, judgements and conclusions. Situations should be observed holistically and objectively without the observer's subjective comments.

Field notes do not cover the whole situation. By taking the field notes, the researcher focuses on certain things of his/her interest. The observer makes chronological and detailed notes of his/her observations. The notes should answer questions, such as: Who? How? When? Where? How long? How often? Which method? Why? The observer makes commentaries about the collected data, he/she interprets the observed events. The process of making field notes starts with preparing the observation scheme, which should be divided into two parts. In the left part exact information from the observation should be noted and in the right part analytical comments, predictions, and expectations should be noted. The researcher should refer to connections between currently observed situations and prior situations.

Participant observation should mediate detailed and extensive information about the observed matter. The participant observer becomes one of the participants for a longer period of time and has to understand the thought processes and behaviour of other participants. The observed participants trust the observer (who is usually covert), they behave openly and naturally with no restraint. This is a way of obtaining the most accurate data. At first, precise reports of activities and literal conversations are documented, then the observer makes conclusions from observed events, sets questions, problems and formulates commentaries. New theories are formed from interpretation induction of collected data.

There might be some problems with ethnographic and naturalistic approaches, which could affect the reliability and validity of the research. We are going to mention just a few. The presence of the observer alters the situation (reactivity), as the participants may wish to avoid, impress, direct, deny or influence the researcher. The "halo effect" refers to the researcher's belief in the goodness of participants, where the negative aspects of their behaviour or personality are neglected or overlooked. The "horns effect" is just the opposite, when the researcher believes in the badness of the participants and the positive aspects are neglected and overlooked. There is a risk of neglecting wider social contexts, when the researchers concentrate on certain individual situations and the macro-contexts cannot be neglected (Flick 2010).

Structured observation is a method used when we know in advance what we want to observe – incidence, presence, frequency of elements, which we may want to compare. Gavora (1998) states that the researcher should use observation schemas, or forms where each category is exactly set. He/she should follow an elaborated manual with exact descriptions of observed subjects, rules of observation, identification, marking and analysing of the observation data. Structured observation takes a longer time to prepare, but the data analysis is fairly rapid and straightforward, if all the categories had been established in advance. Structured observation is useful for testing hypotheses. It is important to know whether the observation is direct (with the presence of the observer) or indirect (sound or video recordings), overt (presence of the observer is evident) or covert (presence of the observer is unknown by one-way mirror, hidden camera), self-observation or observation of others, participant (observer taking on membership roles) or non-participant (typically one-way mirror, video and audio recordings) observation, in natural or artificial (laboratory) settings (ibid.).

Structured observation is very systematic and enables the researcher to generate numerical data from observations. The observer takes a passive role noting down the factors being studied onto a structured observation schedule. The observation schedule should contain discrete, non-overlapping categories, where the researcher makes entries at regular intervals with a tick, a slash, number or a tally mark. The researcher needs to practice completing the schedule to become proficient achieving reliability (ibid). If more than one observer is needed, then all the observers need to be trained and tested. The degree of agreement between observers should be a minimum of 80% (Gavora, 1998) to 90 % (Cohen, Manion, Morison, 2007) for the researchers to be reliable. Also the pilot research should be carried out to test and improve the eventual problems with categories. The researcher needs to decide on the focal point of the observation (people, events), frequency of the observation 3, 5, 10 second (Gavora, 1998), 30 second, every minute, every two minutes (Cohen, Manion, Morison, 2007)), the length of the observation (one hour, twenty minutes), what counts as the evidence and the coding system. The five most important ways of entering data onto the structured observation schedule are: *event sampling*, *instantaneous sampling*, *interval recording*, *rating scales*, *duration recording and critical incidents* (ibid.).

Event sampling is known as a sign system requiring noting marks against each statement each time it is observed. The researcher needs to construct statements based on the research questions. This method is especially useful for finding out frequencies or incidents of observed situations, so that the comparisons can be made. If we want to mark the data in chronological order, we could number each period of observation (Cohen, Manion, Morison, 2007).

Chronological *instantaneous sampling* of events is important. This method is also sometimes called time sampling. Researchers enter what they observe at exact intervals of time (every 10, or 30 seconds, or every minute). The researcher notes down what is happening at that precise moment and enters that into the appropriate category in the prepared schedule. For example, the sampling will take place every 30 seconds and every interval is given a number (1, 2, 3, 4, etc.). Researchers will note down what is happening every 30 seconds in the right category of what is being observed. Instantaneous sampling is recording of what is happening in the instant and marking it in the applicable category, with the time sequence being preserved (ibid.).

Interval recording is in a way similar to the instantaneous sampling as it records data at regular times. The difference is that with the method of interval recording we are not noting down what is happening in the instant, but what has happened during the preceding interval. For example, if the time interval is every 10 seconds, we are recording what has happened in the last 10 seconds. This can sometimes be problematic, if for example three events from our schedule happened during one interval. It would be problematic to note down the sequence of these three events, consequently some elements of chronology might be lost (ibid.).

According to Gavora (1998) by both, the instantaneous sampling and interval recording, the coding can be executed during the whole 45 minute lesson, or during smaller parts of the lesson. The researcher can concentrate for example during the first 7 minutes of the lesson, 7 minutes in the middle of the lesson and the last 7 minutes of the lesson. So instead of the 45 minutes, he/she codes 21 minutes. It is important to keep the same coding intervals, researchers cannot change intervals in the middle of the observation from for example 10 seconds to 30 seconds.

Rating scales is a method by which the researcher has to make some judgements about the events being observed and he/she enters responses

into the rating scale. What is noticeable here is the researcher's high degree of inference, where the researcher has to make judgements about the observed events. This might introduce a degree of unreliability into the observation (Cohen, Manion, Morrison, 2007). Scales normally have between 3 to 9 points, and between 15 to 25 observed events, to cover the whole extent of the observation. Generally speaking, the rating scales are less demanding to carry out, the results are also more general and holistic (Gavora, 1998).

Duration recording is suitable for single and usually short-lived events or behaviours. Sometimes some events or behaviour last a long time and would over-run the interval recording. It records a continuous behaviour rather than a single event. For example, a child has a single tantrum which lasts twenty minutes. What we need is the duration of the particular behaviour. The observation is prompted by the event, not the frequency of the observation. The recording schedule has to be structured to show the total duration of a single continuous behaviour (Cohen, Manion, Morrison, 2007).

Critical incidents is a method by which we observe a particular behaviour occurring only once and it is important to take notice of it even though it appeared only once. Sometimes one event can reveal an extremely important insight into a person or a situation. Critical incidents (events) are particular events which might illuminate very strongly a particular feature of teacher's or pupil's behaviour, or teaching style (child behaving aggressively when asked to work with another child – revealing social tolerance, or teacher overreacting when pupil produces poor work – revealing threshold of tolerance, etc.). These are non-routine unusual events, but they are very revealing and they would not be noted by routine observations (ibid).

Observation (especially structured observation) does not sufficiently cover the whole researched area. Apart from the data collected from observation, the researcher will need to gather additional data from other sources to instruct the interpretation of the observational data (Flick 2010). To maximise the validity of conclusions, a *triangulation* of methods is used. Data are collected not only through observations, but also through interviews, questionnaires and relevant texts. The results of the analysis of each type of data are compared and contrasted. In triangulation, the observers should also examine the lesson plans, and have a brief discussion with the teacher before the lesson, and a longer feedback discussion after the observation (Gabrielatos, 2004), usually with reference to the lesson plan.

By collecting data and by using three methods the researcher can generate a sufficient amount of reliable data.

There is not an exact rule on how much observation should be done, or how long the observation should last. The appropriate amount of observation is when the theoretical saturation has been reached (Adler and Adler, 1994). When the observed situations appear to be repeating data, which have been already collected. Nevertheless, the greater the number of observations, the greater the reliability of the data would be, allowing appearing categories to be verified (Cohen, Manion, Morrison, 2007; Flick 2010).

As we have mentioned earlier, the participants alter their behaviour when being observed and often “act their roles” so as to fulfill the requirement of the inspection. Gabrielatos (2004) believes that observation can still offer various helpful clues, even when the observed teacher performs for the sake of the observer. After all, different teachers translate the same methodologies into practice, or execute the same motions (monitoring, feedback, etc.) in different ways according to their perception of them. Sometimes the teacher decides to “play it safe”, usually by using a proved lesson plan, repeating a previously successful lesson, or by deciding to focus the lesson on what he/she feels comfortable with, rather than what the learners need. Such lessons are not a waste of time, but they are rich in clues. For example, they offer insights into what areas the teachers regard as safe. They also show the teacher’s attitude towards learning in general, and his/her own learning and development in particular.

Observation methods in general are very powerful and useful methods gaining insights into situations. However, they are very demanding on time, as it may take a long time to catch the required behaviour or phenomenon and it can be costly in terms of effort put into it, as it is very difficult to interpret the collected data. There is also a concern with validity and reliability of the collected research data. Even the low interference observation is highly selective. Higher forms of interference rely on greater levels of interpretation by the observer, who makes judgements about intentionality and motivation. That is why additional methods are employed to ensure greater reliability and validity of the research. It is recommended to use three methods in research, which is called triangulation. Observation is not a static research method, it goes through changes depending on the situation and demand. According to Gavora (1998) qualitative observation studies in Slovakia are far from sufficient and optimal. The educational

system in Slovakia is under the process of reform, many new trends are being implemented into the teaching processes. There is a need to record and study these changes, their implementation and impact on education. Observation, just like other forms of data collection in human sciences, is not a morally neutral research method. That is why the observers have responsibilities and obligations to the participants and research community.

Method of observation in Current Language Pedagogy Research

The second part of this paper concentrates on using the method of observation in linguo-didactic research. It is presumed that the method of observation is commonly used in the research in linguo-didactics. Three journals on English language teaching (ELT) were chosen as the source for collecting information. The number one aim of this study is to map the occurrence of the method of observation in the chosen journals. Another aim is to analyze the papers using observation as a research method and try to find connections between the selected articles. For this study we chose these journals: *Cizí jazyky Journal*, *The Asian EFL Journal* and *Oxford ELT Journal*.

The only specialized journal on the theory and practice of Teaching English as a foreign language (TEFL) in the Czech and Slovak republics is the *Cizí jazyky Journal* (ISSN 1804-2171). This journal has been published for 54 years. It is available in print and online. The journal publishes five issues in an academic year. Articles in the last three academic years were analyzed for this study (2007/2008, 2008/2009, 2009/2010). Very little research had been published in the three years studied. Questionnaires were used frequently and there was not a single article published using the method of observation. In the journal's defence, it is not a scientific one, it is mainly aimed at language teachers and trainee teachers .

The *Asian EFL Journal* (ISSN: 1738-1460) is one of the world's leading refereed and indexed journals for second language research. It is published quarterly and it presents information, theories, research, methods and materials related to language acquisition and language learning. The Asian EFL Journal has been published for 12 years. It is available full text for free online. It is a scientific publication, which normally includes around 12 research articles and 4 book reviews in each issue (around 300 pages) from all around the world. Years 2009 and 2010 were analyzed for this research and 12 research papers presenting observation as a research method were found.

The *Oxford ELT Journal* (ISSN 1477-4526) is a quarterly publication on teaching English as a foreign language. The journal links the everyday

concerns of practitioners, and from related academic disciplines (applied linguistics, education, psychology, and sociology). This journal has been published for 64 years. It is available only as abstracts in the online form. Favourably, at the time of this research the full texts versions were available. This journal is a scientific publication, which normally includes around 9 research articles, 8 book reviews and other reviews, comments and announcements in each issue (around 110 pages) from all around the world. Years 2009 and 2010 were analyzed for this research and 7 research papers presenting observation as a research method were found.

The article written by N. Sert (2006) from the Baskent University in Turkey called "*EFL Student Teachers' Learning Autonomy*" was published in the Asian EFL Journal (Volume 8, Issue 2) and it includes the triangulation of three methods: observation, interview and document analyses. The aim of this study was to investigate English language learning autonomy among EFL student teachers in Turkey. Fifty-seven first year student teachers in the English Language Teaching Programme of the Turkish University participated in this study. Qualitative data from structured and unstructured class observations, structured and unstructured interviews with students, and document analysis were gathered. There is a dominance of teacher-led English language teaching in Turkey, learners are seen as passive receivers of new information and are unlikely to develop the skills necessary to learn how to assess and control their own progress. In such cases, learners do not develop the skills to perform real-life communicative tasks effectively. The main tasks for learner-centred language curricula promote language learning autonomy, which develops ability to take charge of one's own directed learning.

The qualitative data on autonomous language learning were gathered through structured/unstructured class observations and structured/unstructured interviews with students. Three courses (Spoken English II, Reading Skills II, and Writing Skills II) were observed for six weeks, and 48 students were interviewed. All related documents such as annual/daily plans, assignments, and projects were also analyzed. They were also observed in the classes and were questioned in the interviews for a more exact interpretation. Each course was graded according to the frequency of the activities (Encouraging learners to use authentic materials outside the classroom, Encouraging group work, Encouraging self-assessment, etc.) on the observation form on a scale of 1-5 with 5 showing the highest, and 1

showing the lowest frequency of the learning opportunities. Only volunteer students (n=48) were interviewed in their mother tongue (Turkish) for about 20 – 40 minutes. The interviews took place in an informal atmosphere, so that the students felt free to express themselves. The researcher took notes of the interview as the students did not feel comfortable with being recorded. As a part of an overall evaluation, documents such as: general annual plans, ELT annual plans, the Educational Programme, questionnaires for parents, and course books were analyzed. Documentation analyses also made it clear that the language teaching programme was not designed to help learners direct their learning efforts towards more autonomous learning and assess their development in the process of learning.

The conclusion from this study indicates that the activities used in the classrooms were not aimed at preparing these particular learners to be aware of their needs and goals, or their strengths and weaknesses as learners. Although there were opportunities for group and pair work (the ones promoting self directing and self evaluating abilities, which can encourage the use of the materials beyond the classrooms), they were not used frequently and effectively. The research showed that the students struggled to use the contents available in their immediate environment to improve the language they had learnt in the language courses.

The observation method in this study was used to gather information on the frequency and types of activities used in English language courses, which was quantitatively processed. Just as the methodology standards theory require, triangulation was used to acquire reliable and valid results. The additional methods were interviews and document analysis and they were processed qualitatively.

The article written by Sert (2010) from the Newcastle University called “A Proposal for a CA-Integrated English Language Teacher Education Program in Turkey” was published by the Asian EFL Journal, Volume 12, Issue 3. The research for this study was carried out in three phases, where observation with audio-recordings was the primary method. The author demands a more effective language teacher education programme and proposed an applicable framework for solving the current problems in English language teacher education in Turkey. Audio-recordings of teachers’ classes were made and analysed (reflexive relationship between the pedagogical goal and actual practice) and a framework was constructed cooperatively with the teachers.

Research consisted of three phases: observation of 14 lessons (audio-recordings were made), analysis of lessons by the teachers and the creation of the SETT framework and post evaluation feedback with the researcher. In the first phase, audio-recordings of classes were made and analyzed according to the reflexive relationship between the pedagogical goal and actual practice. In the second phase, the teachers themselves analyzed the lessons collaboratively with the researcher constructing the SETT framework. Teachers analyzed parts of their lessons, identifying classroom modes and transcribing examples of interactional features using the SETT grid. The third phase, post evaluation feedback with the researcher, was carried out twelve months later. Evaluation of the extent to which the teachers have developed their awareness of their teaching was made. The teachers checked their interactive decision-making while watching videos of their own lessons.

Video recordings (observations) may lead to a more effective language teacher education programme in Turkey. Only through a deep understanding of the unique context of the language classroom, is it possible to provide students with the required skills to communicate effectively, as language is both the medium and the content within this educational setting.

The whole study was based on a series of observations and an analysis of audio-recordings of 14 lessons. The analyses were made by the researcher and the observed teachers. The number of lessons seemed to be too few and the only method of observation (qualitative data processing) presumably does not guarantee reliable data.

The article “A Socio-pedagogic Theory of Classroom Practice to support Language Teacher Development in Asia” was written by Senior (2010) from the University of Western Australia and published in the Asian EFL Journal, Volume 12, Issue 3. The aim of this study was to identify and describe the social patterns and processes that appeared to help the development of class cohesion. The research was carried out in two phases in Australia and led to the development of a teacher-generated theory of classroom practice. Social-psychological development of adult learners was documented through weekly teacher interviews (n = 80), ongoing classroom observations (240 hours), and student interviews (n = 140).

In the first phase qualitative data were gathered through teacher interviews (n=28) until a conceptual framework supported by research insights from social psychology was identified. The interviews revealed that

the students function well in cohesive classes, that the students respond in a unified way and they influence each other.

The second phase documented eight classes of adult language learners through ongoing weekly classroom observations (240 hours), weekly teacher interviews (n=80) and student interviews (n=140). It reported the social evolution of eight intensive English language classes in ten-week courses held in five different institutions in an Australian city. The classes that were selected were as varied as possible in terms of language level, size, student type, type of institution, focus of the course. The classes were multicultural and students were required to interact in English with classmates from different national, linguistic and cultural backgrounds. The courses were intensive between 13 to 20 contact lessons a week. The data were collected through weekly observations and weekly interviews with the teachers, supplemented by student questionnaires and interviews.

The conclusion from this study is that each class group was a unique social entity that evolves as a result of the interaction between a multiplicity of interpersonal and contextual factors that combine in unpredictable ways. The demands of the contemporary world influence the English language teaching and learning in many institutions to have a strongly utilitarian focus, with English regarded as a body of knowledge (e.g. for the purpose of scoring well in exams) rather than a communication skill. Many teachers were reluctant to teach in more student-centred – communicative ways and most of the teaching time was devoted to teaching grammar and vocabulary assuming that that would help students to do better at exams.

The observation method in this study was to gather data about social patterns and processes in adult English language English courses. 240 lessons were observed over a period of ten weeks. Teachers' and students' interviews were also used to gain reliable and valid data. All the data were analyzed qualitatively.

The article written by Sharma from the Tribhuvan University in Nepal tries to show the real picture of ELT classrooms in government-aided schools in Nepal. In the article "ELT Classes and Instructional Management: An Observational Study" the author described and analyzed data collected from 28 classroom observations. Nepal is one of the countries which has included English in the curriculum from grade one to higher education as one of the compulsory subjects. The aim of this study was to look at the condition of different types of government schools, more specifically to find out the

common classroom settings, and to record the standard of classroom interaction. The findings from this study were that the classrooms in the Gorkha district in Nepal were overcrowded, the classrooms were not decorated with teaching materials to create a teaching environment, teachers seemed to move around the blackboard most of the time and presented their lessons from the front, most of the teachers did not use warm up activities, most of the time the teachers tried to impose their own ideas by controlling the classroom, and that the teacher talking time was found to be too high. All the activities took place in front of the classroom, there were no group work or pair work activities, discussion and projects found in the lessons. The teachers seemed to lack confidence in terms of their fluency and pronunciation.

There was only the method of observation used in this study. The author divided observation into three different structured schemas, depending on what she was focusing on. The schemas were structured to categories of classroom settings, classroom movement of the teacher and classroom interaction. All the data were calculated in percentage results and further interpreted. The observed sample (28 classes) seems to be too little for this kind of research - structured observation, which was analyzed quantitatively.

The article "The New Role of English Language Teachers: Developing Students' Critical Thinking in Hong Kong Secondary School Classrooms" written by Mok was published in Asian EFL Journal, Volume 12, Issue 2. Through classroom observation, this study aimed to investigate whether the critical thinking syllabus was translated into the classroom practices of teacher participants. Recommendations of this curriculum highlight the importance of thinking in English language teaching and learning, to develop students' critical thinking through the subject.

The main part of this study was to observe English language classrooms at a secondary school level. Five teacher participants and 1600 minutes (which is about 35 lessons) of classroom teaching were observed. Pre and post classroom observation interviews were also used to elicit teachers' plans for their lessons and their reflections on their own teaching, as well as their views on developing students' critical thinking.

To conclude, only two lessons were identified with time and space for students to think critically and exchange ideas, but without further critical thinking activities, such as promoting different forms of reflection and assessment for learning. Most of the lessons were led and dominated by the

teacher, allowing students very little space for negotiation. The study showed that developing students' critical thinking had never been an object of learning for the five teachers. The teachers felt that the institutional constraints and external pressures made the implementation of the syllabus impossible, consequently they were not playing the new role required.

The method of observation was supplemented by the pre- and post-observation interviews. The study is very inspiring and offers important implications in developing students' critical thinking and in the implementation of educational innovations. It would be worthwhile enhancing to carry out more profound research with a greater sample of teachers and observed lessons. All the data were analyzed qualitatively.

The article "Classroom Interaction in Story-Based Lessons with Young Learners" was written by Li from Fooyin University Taiwan and Seedhouse from Newcastle University in the UK. The study was published in the Asian EFL Journal, Volume 12, Issue 2. The aim of this study was to evaluate the innovative introduction of a story-based approach in EFL classrooms with young learners in Taiwan. Teachers from different primary schools in Taiwan participated in this study and implemented the story-based programme in their classrooms for about two months. Data were gathered by means of classroom observation and interviews with the teachers. The article presents the features of classroom interaction in the story-based lessons through detailed analyses of classroom discourse in teacher-fronted classroom settings. Transcripts of lessons were examined using the conversation analysis approach combined with Cameron's task framework. This study employed a multiple case study design. Two teachers from different primary schools in Taiwan participated in this research and implemented the story-based programme in their classrooms for about two months. There were two classes involved with the average class size around 30 – 35 pupils. Data were gathered by means of classroom observation and interviews with the teachers. A total of 26 lessons were recorded, 4 full lessons and fragments from 17 lessons were transcribed using CA conventions. Two standard lesson transcriptions were used as baseline data for evaluating the innovation in these two classes.

The results show that in the story-based lessons (compared with the baseline data), there are more variations of interaction patterns, more pupil initiations in expressing a wide range of language functions, and they were

found at anytime during a lesson. The findings suggest that the story-based approach creates an entertaining environment which stimulates a higher level of motivation and engagement from pupils.

The data were analyzed qualitatively using the methods of observation and interviews.

The article "Teacher Questions in Second Language Classrooms: An Investigation of Three Case Studies" was written by Yang from the Hong Kong Institute of Education and published in the Asian EFL Journal, Volume 12, Issue 1. This study investigated the types of questions asked by three pre-service English teachers teaching in three different types of secondary schools. A special emphasis was put on exploring the effects of the types of questions teachers ask on the students' discourse patterns. Three lessons were taught by three pre-service teachers and these lessons were video-recorded. The whole class teacher-student interactions were transcribed.

The findings of this study show that in all the three lessons, yes/no questions, and closed and display questions were frequently asked by the teachers, while open and referential questions were rarely or even never asked. The suggestions resulting from this study are that pre-service teachers should be provided with more training in developing their questioning techniques.

The observation method together with the video-recordings and the transcribed lessons were used to analyze the data. The collected data were processed quantitatively. The idea of the research appears very good, just the sample of three lessons is too small for any kind of research, especially for quantitative research.

The article "Students' and Teachers' Use of and Attitudes to L1 in the EFL Classroom" written by Kim from Renaissance International School in Vietnam and Petraki from University of Canberra in Australia, published in the Asian EFL Journal, Volume 11, Issue 4. This study examined the students' and teachers' attitudes to the use of L1 in EFL classrooms at a Korean School in Vietnam. The aims of this study were to examine the extent to which students and Korean English teachers were actually using English and to find out whether the language used in the classroom had any effect (positive or negative) on the classroom interaction and on the successful completion of tasks. The study employed questionnaires, interviews and observations to obtain the participants' attitudes to L1 use in three different settings - beginners, intermediate and advanced students. For the questionnaires 42

participants (teachers and students from three different levels) were used, and 15 randomly chosen participants (both teachers and students) were interviewed. 6 lessons were observed to support the findings from the questionnaires and interviews. Observation notes were made using an observation sheet that aimed to record information about the degree of L1 used in different activities and the effectiveness of the lessons. In summary, the study suggests that beginner students depend on L1 for effective learning of L2, whereas advanced students depend on high L2 use.

The findings from this study are that L1 played a supportive role in the language classroom. L1 was found useful for explaining the meaning of words and grammar explanations but inappropriate in pair-work and group-work activities. Korean English teachers emphasized the importance of using L1, but the native English teachers emphasised the importance of using English exclusively.

There was a method of triangulation used in this study: questionnaires, interviews and observation to gain the validity and reliability of the findings. The main methods were the questionnaires and interviews and observation was used as an additional method to validate the participants' views drawn from the questionnaires about the appropriateness of L1 use. All the data were analyzed qualitatively.

The article written by Huang and Radant from the National Yunlin University in Taiwan entitled "Chinese Phonotactic Patterns and the Pronunciation Difficulties of Mandarin-Speaking EFL Learners" was published in the Asian EFL Journal, Volume 11, Issue 4. The aim of this study was to draw EFL teachers' attention to pronunciation difficulties resulting from L1 phonotactic constraints. 34 graduate and 112 undergraduate non-English major college students were tested. A 145-word reading passage was developed with a total of 30 target problematic sounds, which included the problematic syllable structures that exhibited Mandarin phonotactic constraints and the most troublesome segmental sounds identified in other studies. Each participant had to read the passage out loud, reading was recorded for later evaluation. After marking the pronunciation errors, each target sound was counted for its frequency of mispronunciation and statistical analysis was applied to see the frequency distribution of all the target sounds. The results validated the hypothesis, which demonstrated that the successful pronunciation of individual sounds does not automatically transfer to successful pronunciation at the word level.

It is suggested that apart from the teaching of segmental sounds and word stress, teachers need to be informed of the relation between L1 phonotactic constraints and English mispronunciation.

The study used direct and indirect observation to mark and count pronunciation errors in peoples' speech. The study concentrated on the frequency and types of pronunciation errors resulting from L1 phonotactic constrains. The data were processed quantitatively.

The article written by Tan, Mohamed and Saw from the University Sains in Malaysia called "Improving school English in Malaysia through participation in online threaded discussion groups" was published in the Asian EFL Journal, Volume 11, Issue 2. This paper presents some characteristics of the interaction of a group of adolescent boys in an online discussion group. The discussion included the boys' use of a language hybrid (mixed local expressions as well as short phrases in English). The study suggests that this form of using English can also improve the school English. Literacy practices on the Internet are rarely used by English teachers. That might be because the teachers fear language at school. What is important is that the students have to be aware of switching to school English when it's required. The argument is that the English teachers can act as onlookers and facilitators of students' online discussions not only to help them achieve writing goals and correct grammatical errors but also to increase their use of English.

This study on the writing in English involved a 6 month period of fieldwork at a secondary school in Malaysia in a class of 31 sixteen year old students. One of the authors was a participant observer. 11 writing lessons of 70 minutes duration were observed. Initial semi structured interviews and two shorter follow up interviews were the additional research methods. The data were analyzed qualitatively.

The article called "Vocabulary Learning Strategies in an ESP Context: The Case of Para/medical English in Iran" was written by Akbari from Isfahan University of Medical Sciences in Iran and Tahririan from the Sheikhbahae University in Iran. The study was published in the Asian EFL Journal Volume 11, Issue 1. This study attempts to examine the extent to which Schmitt's taxonomy keeps its relevance in ESP contexts. The authors of this study claim that even though there is a broad range of taxonomies of vocabulary learning strategies, but they seem to be incomplete in terms of strategies or factors important for vocabulary learning. According to the authors Schmitt's taxonomy seemed to be the most suitable, but needed to be tested. To do so,

a qualitative study was designed and carried out in which 137 participants, who were selected randomly from undergraduate medical and paramedical students. Data on vocabulary learning strategies in an ESP context were elicited by observation, interview and questionnaire.

The findings of their study led to the modification of Schmitt's taxonomy making it more comprehensive. The purpose behind challenging taxonomies of vocabulary learning strategy was to gain more insights about the vocabulary learning process and point out effective ways for teaching and learning vocabulary.

The triangulation of methods was used: observation, interview and questionnaires to reach reliable and valid data. The data were analyzed quantitatively.

The article written by Trent from the Hong Kong Institute of Education in Hong Kong "Enhancing Oral Participation Across the Curriculum: Some Lessons from the EAP Classroom" was published in the Asian EFL Journal, Volume 11, Issue 1. This paper problematizes Chinese learners alleged reticence by examining how one group of undergraduates at an English medium of instruction university in Hong Kong were able to meet the demands placed upon them for participation in spoken activities within their English for academic purposes classroom. In order to better understand learners' participation in classroom discussion, as well as the thoughts and feelings of both teachers and students about this participation, data were collected using interviews, questionnaires and classroom observation over an entire semester. Four classes were observed for 12 weeks, interviews were conducted with both the students and their teachers. All interviews were audio recorded and transcribed.

The outcome of this study is that even though the student participation in English classrooms is highly valued the students had very little choice over whether or not to participate as only about 40% of assessments were oral based tasks.

The triangulation of methods: observation, interview and questionnaires was used for more reliable and valid data. The data were analyzed qualitatively.

The article written by Williams from the University of Illinois in the USA "Beyond the practicum experience" was published in the Oxford ELT Journal, Volume 63, Issue 1. This study discusses the collaborative projects between language learners and pre-service language teachers, which offer valuable

practical experiences for both groups. The pre-service teachers from the MA programme in TESL at the University of Illinois in Chicago were trying to extend their practical experience in the ESL classes within their own institution. The MA students were observing the ESL classes and also student teachers were placed in the classes under the supervision of experienced mentor teachers. The project was performed with a series of role plays of service encounters by several members of the class while the rest of the class and MA students observed and took notes. The project produced a large amount of data of about 100 encounters. The MA students were posting their findings online, along with their tips and descriptions of their experiences. The programme was successful, it allowed the students to expand their practical experience of the MA TESL programme and for the ESL students, it provided a chance to interact with native speakers, as well as valuable cultural and sociolinguistic information.

The study was more of a description of a project of cooperation of students of TESL and ESL students. The project was conducted with the use of the observation method.

The article written by Hardison from Michigan State University in the USA and De Segovia from the Prince of Songkla University in Thailand "Implementing education reform: EFL teachers' perspectives" was published in the Oxford ELT Journal, Volume 63, Issue 2. The objectives of this study were to investigate the reform mandated by the National Education Act of 1999 in Thailand, which was to change the teacher-centred instruction to the learner-centred instruction (communicative language teaching) for all subjects including English. This demand was associated with the needs of globalization, which includes an ability to communicate in English. The number of English lessons has significantly been changed by the reform. Some studies reported that the teachers felt inadequately prepared for these changes. Consequently, there arose the need to provide training for in-service teachers in the learner centred approach. The data were collected from the lesson observations of pupils in grades 5 and 6 and teacher interviews. Pair work, group work, use of communicative tasks, quantity and functions of English use were observed. The classes were audio-recorded for later reference and the observer also took field notes. Preliminary classroom observations and interviews were conducted with ten English teachers from different schools in two major metropolitan areas. From these teachers, three met all the criteria. Three classes taught by each of the three teachers

were observed. Observations were analyzed quantitatively on the relative proportion of English and Thai usage by each teacher. Interviews were made with the teachers to find out their understandings of the reform, concerns about their professional development and instructional support. The interviews revealed that the teachers were concerned with their English proficiency, insufficient training, inadequate resources and professional support. Findings point to areas of the curriculum in which coherence can be lost during reform.

The methods of observation and interview were used to gather the data and they were analyzed both quantitatively and qualitatively.

The article "The collaborative development of teacher training skills" was written by Stillwell from the University of Wisconsin in the USA, and was published in the Oxford ELT Journal, Volume 63, Issue 4. The study describes the "mentor development" (collaborative professional development of EFL teachers) through peer observation. 19 all native English speaking EFL teachers at Kanda University in Japan took part in this project by observing each others lessons. A series of three classroom visits were executed. Teacher A observed Teacher B, Teacher B observed Teacher C, and Teacher C observed Teacher A. After the set of classroom visits had been completed, the three teachers gathered for a post-observation conference, which took place in three two-part stages, with each participant playing a different role at each stage. By observing and discussing their lessons, all participants gained a deeper understanding of the challenges involved with giving feedback and developing self-awareness of their own behaviour. The observations can lead to renewed enthusiasm for teaching by getting new ideas for trying things out, or finding comfort in the knowledge that other teachers also have to face certain challenges.

This study used the method of observation as a means of carrying out the project on improving the professional development of EFL teachers. The analysis was carried out qualitatively and with simple descriptive statistics.

The article "Dealing with learner reticence in the speaking class" was written by Head from Nottingham Trent University in the UK and Zhang from the Yanshan University in China, and was published in the Oxford ELT Journal, Volume 64, Issue 1. This study deals with the research carried out at an oral English course for non-English majors at a university in China. Students in the first year of the English course were very resistant to participate in group-based speaking activities and their end of the year results were disappointing.

Based on this experience, the teacher wanted to increase the motivation of the students and to help them to overcome reticence by getting them to talk about what and how they wanted to learn. In the second year, the teacher decided to involve the students actively in designing their course and planning activities, which would help them to want to speak in English. The teacher expected that both their confidence and ability to speak in English would improve when they would be involved in designing the course. One of the authors of this study was the English teacher. The participants were a class of 60 students majoring in automobile construction. The textbooks used were topic based covering all the skills. Oral English was taught as a separate component with two lessons per week over the 18 week semester. The method of observation was used by the teacher to monitor changes in learner behaviour and attitudes to speaking English in class. The effectiveness of the new approach was assessed using self-evaluation forms, classroom observations, and tests which showed significant progress in the students' speaking.

The combination of self-evaluation forms, classroom observations and testing required using both the qualitative and quantitative analysis of the data.

The article written by Xie from Shanghai International Studies University in China called "Why are students quiet? Looking at the Chinese context and beyond" was published in the Oxford ELT Journal, Volume 64, Issue 1. This study is a part of a larger project on teacher-student interaction and the contextual issues. The reports say that the reticence of English majors is caused by the communicative environment that the teachers create in their interactions with their students. The classroom observations, audio and video recordings were made over a two and a half month period to collect data. The analysis revealed that the teachers' thematic control lead to students' low interaction levels. Based on the findings, implications were discussed and also some possible changes to teaching were proposed.

Only the method of observation was used to gather data. For more profound information audio and video recordings were made. The data were analyzed qualitatively.

The article "Critical Friends Group for EFL teacher professional development" written by Vo from International University in Vietnam and Nguyen from University of Queensland in Australia was published in the Oxford ELT Journal, Volume 64, Issue 2. This study aimed to explore the

experiences of a small group of Vietnamese EFL teachers (4) during their participation in a Critical Friends Group (CFG) over one semester in a specific context in Vietnam. Although the sample size of this research was only limited to four participants, this group was studied in depth for one semester. In order for the students to get the best possible results, teachers needed to engage in continuous professional development, among which the CFG technique was used as one of the models. The methods of observation and interviews were used in this study to offer insights into the participants' experiences as well as the application of CFG as a model of EFL teacher professional development in Vietnam. The teachers agreed that the CFG model helped to improve their motivational skills. The teachers valued that they were learning from observing as well as from being observed. Peer observation helped the teachers' awareness of the weaknesses in their teaching.

The methods of observation and interview were used in this study and all the data were analyzed qualitatively. The sample was small, but the long term one semester research provided reliable and valid data.

The article "Reducing student reticence through teacher interaction strategy" was written by Lee and Ng from Chinese University of Hong Kong and was published in the Oxford ELT Journal, Volume 64, Issue 3. The article states that reticence is a common problem faced by EFL teachers, especially with Asian students. The aim of this study was to examine whether teacher interaction strategy could be one of the factors triggering student reticence in classrooms. A group of Form 1 (age 12) Hong Kong Chinese pupils were given two lessons characterized by different interaction patterns and these lessons were videotaped. By the indirect observation of the videotaped lessons, the lessons were analyzed. The results show that teacher strategy is a major determinant of student reticence in classrooms, but it is not the sole factor. Pedagogical factors such as lesson objectives and task type were also found to influence a teacher's classroom-based interaction strategy decision making.

The method of indirect observation was used to analyze the lessons taught with different interaction patterns. Only two lessons were analyzed in this study, which is in our opinion insufficient and more lessons would be required for the further analysis. The data were analyzed qualitatively.

Conclusion

As was mentioned earlier, the method of observation is the most natural method, gaining data first hand from real situations. The set of the 19 above mentioned and analyzed studies were very heterogeneous in terms of the types of research carried out. This fact shows the flexibility and adaptability of this method. 17 studies analyzed data qualitatively, which is 89 % of all analyzed studies. From the 17 studies, four studies combined both qualitative and quantitative (descriptive statistics) data analysis. Only two studies analyzed data entirely quantitatively. This shows that the method of observation is the most suitable and used for qualitative data analysis. The observation method has problems with reliability and it is advised to use more research methods to provide reliable data. The most recommended is to use three methods – triangulation. 5 studies used three different methods as recommended to gain the most reliable and valid data. The combination of observation, interview and document analysis (1 study), or observation, interview and questionnaires (3 studies), or observation, self evaluation and testing (1 study) were found among the analyzed studies. Eight studies used two different methods: observation and interview (6 studies), or observation and discussion groups (2 studies). Six studies used only the method of observation in their research studies. The number of participants, lessons and the length of the studies vary considerably from very short studies with small samples to very extensive ones with large samples of participants and lessons. To sum it up, the method of observation deals with systematic examinations of real-time processes with the aims to identify needs or to improve practices that can be seen. Observational research findings are considered strong in validity because the researcher is able to collect a depth of information. However, there are problems with reliability and generalizability. Overall, the method of observation is an extremely valuable tool for research in language pedagogy because of its unique strength of authenticity and validity of the data.

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Abstract

The paper deals with the method of observation theoretically and also analyses published studies, which used the observation method in their research. The first half of the paper introduces the method of observation, analyses different types of observation, and the roles of the observers. Qualitative (unstructured observation) and quantitative (structured observation) types of research are discussed including the ways of collecting data, and the various advantages and disadvantages. Triangulation of methods is also considered, as it is often used in studies with the observation method. Triangulation is used to improve the quality of research, especially the validity and reliability of unstructured observation. The second part of the paper deals with the particular research studies, where the method of observation was used. The studies were gathered from three journals on English language teaching: Cizí jazyky Journal, The Asian EFL Journal and Oxford ELT Journal. The aim was to map the occurrence of and types of observation methods used in the published research within the chosen journals, and to find connections between the selected studies.

Keywords

observation, qualitative research, quantitative research,

Extent: 81 216 characters

THE USE OF FOCUS GROUP IN EDUCATIONAL RESEARCH

Elena Kováčiková, Renáta Prokeinová

Introduction

Recently, the impact of qualitative research has grown rapidly in educational research. Qualitative features such as attitudes and perceptions are explored and followed with the help of various research methods. Research methods overlap within the areas of the research and sometimes they found their use in different fields they were meant for. The SWOT analysis, focus group are the clear examples. The term focus group is connected with the sociologists Lazarsfeld and Merton (1948). The term 'focus group' was used first in Merton's paper published in 1946 in the American Journal of Sociology. However, the use of focus groups has become more popular since then. Its popularity started in the 1970s (Cozma, 2007).

Krueger (1995, p. 3) states that "the focus group originated in the 1920s in the social sciences, developed further after World War II in market research, and presently is undergoing a resurgence in the social sciences". According to Bellenger et al. (1976), the focus group originally developed from the psychiatric group therapy method. It was used in World War II to increase military morale. Cohen et al. (2007) consider the focus group to be a form of group interview, though not in the sense of a backwards and forwards between an interviewer and a group. It is the interaction within the group who discuss a topic supplied by the researcher, yielding a collective rather than an individual view. The participants interact with each other rather than with the interviewer and the data emerge from the interaction of the group.

Focus group is often used in a career counselling as a qualitative method, such as interview which aim is to produce a certain type of information. It is an explorative technique, connecting a smaller number of people led by a moderator who facilitates the group. The moderator uses a prepared frame of a group interview so that the group remains focused on a topic and the participants speak freely and spontaneously about topics they

were told about beforehand and which are interesting for them (Jarell, 2000; Cozma, 2007). Focus group research has gained “increased acceptability within academic institutions” (Krueger, 1995, p. 525) due to increased use and the insights it provides into the participants’ experiences (Jarell, 2000).

According to Cohen et al. (2007, p. 19), the use of focus groups is growing in educational research, albeit more slowly than, for instance, in business and political circles. It is a form of group interview and interaction between participants and a moderator on a chosen topic, bringing together a specifically chosen sector of the population to discuss a particular given theme or topic, where the interaction with the group leads to data and outcomes. They are economical on time, producing a large amount of data in a short period of time, but they tend to produce less data than interviews with the same number of individuals on a one-to-one basis.

Focus group research is thus useful for:

- orienting to a particular field of focus;
- developing themes, topics and for subsequent interviews and questionnaires;
- generating hypotheses that derive from insights and data from the group;
- generating and evaluating data from the subgroups of a population;
- gathering qualitative data;
- empowering participants to speak out, and in their own words;
- encouraging groups, rather than individuals, to voice opinions;
- encouraging non-literate participants providing greater coverage of issues than would be possible in a survey;
- gathering feedback from previous studies (ibid, pp. 377-378).

Forming a group

According to Krueger (1988) a focus group is a series of discussions intended to collect participants’ perceptions, set in a permissive, nonthreatening environment. When appropriately used, the focus group method can result in high quality data that lead to high quality decision-making. Reliable, valid information collected in a manner that takes the values and needs of stakeholders into consideration has the potential to reduce conflicts when providing leadership to decision makers in organizations and communities.

As Cozma (2007, p. 5) suggests, when forming a group of participants, it is possible to use some of the following recruitment methods:

- *by institutionalized recruitment* – with the help of institutions and organizations;
- *by professional agents*, with the aim to have all the respondents within the field where the agents work;
- *by invitations sent via mail*.

Samples of focus groups can be formed based on several typologies. Cozma (2007) presents several typologies which are most commonly used:

1. *3 x 3 system* – is based on the interconnection of a maximum of 3 variables whereby each has not more than three categories. The mostly used variables include: age, sex, education, family status, and address. This system has been applied on the professional samples so that the outcomes are more consistent but heterogeneous at the same time. Such a typology is useful when we focus on certain social and professional categories with the aim to catch “inner differences” within the categories.
2. *Perfectly homogeneous samples*. In this case the aim is to have all the participants compatible in order to gain the maximum amount of information. It is used for the groups and categories with different problems (social integration, marginal groups, etc.).
3. *Sex-based structured samples*. For highly effective communication, the moderator should be of the same sex as the members of the group.
4. *Conflict samples*. In such samples we can find members of different categories (at least two active members of each). Categories must be polarized. Such samples produce argumentation and emphasize communication barriers.
5. *Sample of professionals*. It is used mainly for research, in which the base is the information and knowledge of highly qualified professionals.
6. *Samples of children and teenagers*. In such cases the consent of parents is necessary. Attractive materials such as interactive boards, photographs, role-plays are recommended; so that they feel free and relaxed in a group. A moderator should apply competent verbal and non-verbal skills.
7. *Samples of parents*. A group is made from members of one or several families interested in a common topic. The moderation of such a group is very demanding, mainly in the case of very traditional families where the

power is held by one person. Role-plays based on changing the family roles can be very useful and helpful for an insight.

According to a group of academics working at the Department of Sociology and Agriculture Education and Studies (2004, pp. 1-2), focus groups share features with other forms of group discussion. The features that set focus groups apart are:

- a clear plan for a controlled process and environment in which interactions among participants take place;
- use of a structured process to collect and interpret data;
- participants are selected based on characteristics they share as opposed to differences among them.

All in all, creating a group is in this qualitative method one of the key issues.

Constructing questions

Another key issue in successfully conducting a focus group is the formulation of questions. The first step in creating a focus group is to prepare a draft of the interview to a given topic. It is essential to define a thematic perspective of a problem and stick to the objectives of the research. More authors (Krueger, 1988; Michell, 1999; Cohen, 2007) agree upon the following points:

- Questions should address the concerns of both instructor and students.
- If the goal of the focus group is to help the instructor make improvements, it is especially important to address any concerns the instructor might have upfront.
- 5 to 7 questions should be planned for a sixty-minute session to allow enough time for everyone to speak and for any unanticipated answers that lead to new questions.

When thinking about the questions, the following guidelines are useful:

- Questions should be open-ended. Questions that can be answered “yes” or “no” should be avoided.
- “Why” questions are rarely asked in a focus group. Why questions tend to imply a rational answer whereas the participants are expected to openly share their impressions, opinions, and perceptions.

- Questions should be systematically and carefully prepared but have a natural feel and flow. Feedback on the tone and flow from colleagues beforehand is appreciated.
- Questions should be arranged in a logical sequence. Usually this means going from the general to more specific about a topic before moving on to another topic.
- Unanticipated questions are allowed.

Kreuger (1996) makes a list of different types of questions appropriate to each stage:

- *Opening questions*: these are questions asked to everyone around the group. These can be used to create a relaxed atmosphere and to identify characteristics group members have in common.
- *Introductory questions*: these introduce the general topic for discussion and start people thinking about what experiences they have that connect them to the topic. These questions help start conversations and interaction in the group.
- *Transition questions*: these are questions which introduce the key area of the study; they help the people link the general topics discussed in the introduction to the specific topic of the study.
- *Key questions*: these are the crucial questions for the study and the ones that will be used for the analysis. There are usually only 2-5 questions in this category and these should be the ones that are really carefully planned.
- *Ending questions*: this group of questions brings the discussion to a close and lets the group reflect on what they have discussed. It is important to leave time for this, about 10 minutes should be enough (in Guidelines for Running a Focus Group/Group Interview, p. 3).

Role of a Moderator

Not everybody is suitable to be a moderator of a focus group. The *profile of a moderator should contain* the following criteria (Sudu, 2003):

1. Professional competences:

- mastering methodologies and techniques of interview,
- experienced in leading small groups,
- enough knowledge on the subject,
- empathy towards the discussed topic.

II. Communication skills:

- effective active listening;
- non-verbal communication analyzing;
- negotiation;
- leading discussions in a subtle, non-disturbing way;
- openness (empathy, but objectivity);
- supporting of a process (gestures, mimics, facial expression, no signs of ignorance or refusal);
- communication management;
- conflict management;
- art of asking questions in order to get into the mental or emotional state of respondents.

III. Personal qualities:

- extrovert;
- dynamic, active and energetic;
- communicative with a sense of humour;
- narrative qualities, empathetic, emotional, spontaneous;
- aware of mistakes, etc.

The moderator also plays an important role when mastering stronger personalities within a focus group. In such cases there are different techniques which aim to suppress the tendency of some members to rise up into a position of an expert and present their opinions or facts. Then, a rule might be accepted, that any claim can be explained to a group, and thus, we lead the group to managing other opinions. It is necessary to manage the communication and support silent members to communicate. Michell (1999) notes that in many situations the moderator must also be able to analyze the data from the focus group. However, in different papers there are different opinions on the question of whether it is suitable to be a researcher and moderator in one.

Procedure of a focus group

According to Jarrell (2000), once the group is formed and a moderator chosen, the moderator is in charge. The focus group should begin with an introduction by the moderator. During the introduction he/she greets the participants and explains the purpose of the focus group. The moderator also

establishes the ground rules for the group: briefly describing his or her role, disclosing how the group discussion will be recorded, explaining the confidentiality of participants' comments, indicating that participants' opinions are neither right nor wrong, and requesting that participants speak one at a time.

After that, the moderator introduces the focus group concept. Once this is completed, the moderator begins to elicit information from the participants by presenting them with the stimuli to be used or the questions to be addressed following the guide.

In the end, the moderator summarizes the information obtained and allows the participants the opportunity to revise the recorded input if necessary. Then he/she closes the group (ibid).

Duration of a focus group

As Jarrell (2000) suggests, the length of time for which the groups meet may vary according to the type of participants. If the meeting is for a marketing focus group, the time usually ranges from one and a half to two hours. In a school setting, the time frame is generally somewhat shorter in order to allow students and/or teachers to meet during their classes. However, the shorter meeting reinforces the need for a well planned session.

Data analysis

As it is mentioned by Cohen (2000) focus groups might be useful to triangulate with more traditional forms of interviewing, questionnaires, and observations, etc. According to Jarrell (2000), the researchers must summarize and analyze the data and draw their conclusions as soon as possible after the focus group meeting. If the focus group was held to formulate hypotheses, the hypotheses are probably fairly developed by the end of the meeting. If the group was held to investigate attitudes, the researcher will have to analyze the moderator's notes, recordings and other information using established qualitative data analysis techniques. The "process of analysis is the least agreed on and the least well developed" (Carey, 1995, p. 487) of all aspects of focus group research. In our case we decided to carry out a SWOT analysis of our findings. SWOT analysis is an instrument of strategic planning used for the evaluation of S (strengths), W (weaknesses), O (opportunities) and T (threats). This method of evaluation was first used by Humprey who conducted his research project at Stanford University in the 60's.

Tab. 5: SWOT analysis (a basic diagram) (Veselá, 2009, p. 41)

	Positive aspect	Negative aspect
Internal factors	Strengths	Weaknesses
External factors	Opportunities	Threats

SWOT analysis is used for the evaluation of sales methods, products, investments, human resources as well as teaching programs and teaching aids. This tool is mainly used during the considered evaluation of programmes. SWOT analysis describes positive and negative aspects and identifies the factors in the environment which may positively or negatively influence projects. By doing so, this analysis reduces uncertainties and supports the strategy's improvement or its assessment. SWOT analysis belongs to the group of tools studying the relevance and possible coherence of specific programmes or entire strategies.

Flores (1995) who carried out the educational research on the school reform in Spain, states that before carrying out the analysis, it is necessary to make transcripts of the recordings. Sometimes qualitative data attained by the means of techniques of educational research are analyzed from an intuitive-artistic point of view. The majority of authors who use the focus group technique in market research and other fields of sociology favour a more systematized analysis process. SWOT analysis seemed to be a very effective tool to evaluate the gained data, therefore we used it in our research described below.

Focus group used in educational research

In this part we would like to shortly introduce examples of the studies where focus group meetings were used as at least one method of reaching the objectives.

The first example we will look at is of **focus group formation in the research on educational reform in Spain** (Flores, Alonso, 1995, *pp. 84 - 101*). According to this research, the application of focus groups in educational research has become particularly useful in evaluation, as an ideal qualitative technique to evaluate viability, to anticipate effects, and to evaluate

implementation of focus group. The focus group techniques in the research give details about the methodological process, and include a practical application: it provides teachers' perspectives toward the reform which was about to be applied in the Spanish educational system. Regarding the research problem, the reform in Spain was an ambitious undertaking with a goal of introducing noticeable changes in all levels of the educational system. Structural innovations and reconceptualization of the educational model would have implications for the design and implementation of the curriculum, teachers' views of the educational system, in-service teacher education, and even school image.

Talking about teachers' perspectives toward the educational reform, the researchers refer to a vast group of opinions, perceptions, impressions, feelings, expectations, and desires concerning the reform. They adopt the concept of perspective, assuming that they can be known through the way people express their thoughts and experiences in the course of group discussion.

As for the group formation, by following the rules mentioned above, the researchers carried out population research to determine the different subgroups that can be distinguished in it with respect to teachers' perspectives about the educational reform. The personal and professional variables (age, sex, professional experience, implication in educational innovation activities) motivate different ways of arguing, putting forward opinions, and acting toward the reform. From the information collected about these variables from an extensive sample of teachers from the province of Seville, they distinguished six teacher profiles. An analysis of the characteristics of each class allowed the researchers to define six focus groups:

FG 1: teachers highly involved in the educational innovation;

FG 2: teachers younger than 30 years old and with less than two trienniums of professional experience;

FG 3: male teachers in high levels of primary school with professional experience between three and seven trienniums, and with qualifications above those required for their position;

FG 4: teachers with professional experience between three to seven trienniums, in medium levels of primary school, and with a normal involvement in educational innovation;

FG 5: teachers with professional experience of two or less trienniums and at the nursery school level;

FG 6: teachers older than 45 years of age with more than seven trienniums of professional experience and with low involvement in educational innovation activities.

Once the number and composition of the groups were determined, it was important to decide how many people would take part in them. Focus groups normally have between 6 to 10 members. Due to the focus group method researchers were able to gain different views and opinions on the school reform from the teachers of various ages and teaching practice. Their attitudes were evaluated and consequently taken into consideration by the competent authorities. Thus, using focus groups as a method met the expectations of the researchers and opened different views on a topic in a short time.

The **Scottish Council for Research in Education (SCRE)** also employed the use of focus groups as an applied method for research during 1994-95. They undertook a study of adults' perceptions of their lifestyle options within a Scottish region. The findings of the research were intended to inform initiatives about health education in different social groups (e.g. homeless teenagers, prostitutes, middle-aged women and university students). The early stages of the research had identified what people did but were unable to provide insights into what they thought, and why and how these thoughts were developed, expressed or modified in different circumstances – information which is crucial to the development of efficacious health education programmes. Therefore, qualitative methods were employed. The research design was based upon two stages: 50 in-depth individual interviews and six focus group meetings. Ultimately, 54 individual interviews and seven focus groups were conducted. Both stages were recorded and transcriptions and field notes analysed. In addition all participants were requested to complete a short questionnaire at the end of each session. Twenty-two of the individual interviews were conducted by the principle researcher of the project; others were undertaken by two colleagues. Two researchers were present at six focus groups and the one was conducted by the principle researcher of the project. The results of the research identified for example how participants conceptualised sex, contraception, protection and parenting as well as the language which they used to articulate their thoughts. The findings were intended to inform future developments in health education.

Again, using the focus group as one of the methods proved to be an effective method for gaining a lot of qualitative data which were analysed and interpreted in order to cover the questions which were not answered by other methods. According to the author of the paper (Wilson, 1997), the strength of focus groups in educational research lies in the apparent 'face validity' of data generated. Respondents, researchers and funders hear the voices and empathise with the 'stories' which emanate from the groups. It demonstrated a greater variety of discourse than is available in other methods. When comparing individual interview and focus group data, it cannot be claimed that one is necessarily more valid, or generates more authentic data, than the other. Both individual interviews and focus groups are socially contrived situations established by the researcher. If the researchers are interested in understanding how respondents develop concepts, how their concepts withstand challenges from other people and how these may be modified in the light of discussion with peers, then focus groups offer one way to examine the challenges and ambiguity of the group processes.

The third example of the use of focus groups in educational research was a project called **Focus groups in education research: Using ICT to assist in meaningful data collection**. The study was conducted by Moyle in 2005 at the University of Canberra, Australia. This research differs from the traditional approaches where data were collected by video recorders or note takers. This special research draws upon the Australian study that explored educational leaders' views about the relationships between school leadership, and teaching and learning with information and communication technologies. In the research the data was collected through face-to-face focus groups, and where ICT was incorporated into the research method. It was conducted in 2005 to investigate the question: How does educational leadership support learning with ICT in Australian schools? The new technology was introduced within this project. The researcher chose to facilitate each focus group with the assistance of the software *Zing*. The Zing software enables a network of multiple keyboards to be linked to a single portable computer with each keyboard allocated its own self-contained space on the screen of that computer. That is, several cursors are all able to work on the same screen at once. The participants were encouraged to discuss the focus group questions with each other to clarify their ideas and then the participants recorded their views by directly entering them into the computer

with the use of one of the keyboards, and without mediation from a third party. Once the participants had completed their responses to the focus group question, with the aid of the Zing software, the responses were read through with the whole group, and participants were invited to make observations, identify themes and add further comments. This could be understood as an innovative technique on the one hand, but on the other hand, it allows for the use of an impersonal technical device instead of the moderator's communication competences. Participants were collected from various educational fields, from school leaders or ICT leaders, academics working in the field of ICT in schools, students, parents, or industry representatives with an established interest or involvement in the field of ICT in school education. They were directly invited to participate by the researcher via the letter signed by the Chief Executive of Teaching Australia. All focus groups (total amount of focus groups were 40) in the project were conducted in comfortable surroundings: usually in a conference room. Open-ended questions were used to encourage discussion among the focus group participants. All the conversations were recorded by the Zing system. The transcripts of each focus group session generated through the Zing system were coded by the researcher and analysed for the major themes that emerged for each question. In conclusion, the researcher found that the use of Zing for data collection enabled her to conduct a major, national research project in a timely manner.

Empirical Part: Research at SUA in Nitra Slovakia

In this part we would like to introduce the research conducted by the authors at the Slovak University of Agriculture in Nitra (SUA), at the Department of Language Professional Education in cooperation with the Department of Statistics employing the use of focus groups as one of the methods used. The aim of the research was to implement CLIL (content and language integrated learning) through project work within the classes of ESP (English for Specific Purposes). Apart from the experiment and content analysis, the qualitative method of using focus groups was used to find out students' opinions and attitudes towards the implementation of project work. There were two focus group meetings, consisting of 20 and 25 people. We analyzed them with SWOT analysis which is described in the end of this section. In order to gain a better understanding it is necessary to take a closer look at the particular objectives set in the research.

The students in the ESP classes at the SUA were the samples of the research. Among the other activities, the Department of Language Professional Education at the Slovak University of Agriculture (SUA) covers all the ESP classes of the so-called “green faculties”, namely the Faculty of Horticulture and Landscape Engineering, the Faculty of Agrobiological Sciences and Food Resources, the Faculty of Biotechnology and the Faculty of Engineering. Speaking from our personal and professional experience, the current situation of the language classes seems to be as follows:

- the level of the classes varies from A2 to B1 level according to CEFR (2001);
- the level of initial linguistic competence of the students varies from lower A2 to B2 level;
- the material used in the class is a textbook with adjusted professional texts on various topics regarding the study fields at the mentioned faculties (generalized rather than very specific). The textbook is up-dated every two to three years as a cooperative activity of all English teachers at the department;
- part of the textbook is devoted to the grammar section, different speaking and listening activities;
- there are 2 contact classes per week, i.e. approximately 28 per semester no additional computer based material or Moodle course are included in the syllabus;
- ESP teachers use different methods (Translation method, Communicative Approach, Direct method, etc.) with the aim to enhance communicative competence as well as professional vocabulary acquisition.

Research aims

The main purpose of the research was to prove that the implementation of project work contributes towards the modernization of ESP classes in the Slovak University of Agriculture in Nitra, Slovakia.

The main research aims are:

- to find out whether the application of project work in ESP classes increases the amount of professional vocabulary;
- to find out how the application of project work in ESP influences the acquisition of covered grammar structures;
- to find out whether the application of project work in ESP develops the reading comprehension in the specific texts;

- to find out students' opinions and attitudes on CLIL implementation in ESP classes;
- Focus group methods served as an instrument to achieve research aim number 4.

Procedure of the research

The research was conducted in the winter term 2010. The experimental group of 80 students were divided into three groups and were given the introduction class with all the description and explanation of the project work. The students had a chance to work on their projects in teams of 2/ 3 people. They also chose the dates of their presentations in front of the teachers and other students who evaluated the project from the point of view of form, content and presentation techniques. The dates were arranged within the teaching plan. The level of English of the experimental group was A2 (Pre-Intermediate).

The following topics were offered:

- Travelling and transport (topic recommended mainly to the students of the Faculty of Engineering);
- City Greenery (for the students of the Faculty of Horticulture and Landscape Engineering);
- Nutrition (for the students of the Faculty of Biotechnology and Food Production);
- Natural Environment (for the students of the Faculty of Agrobiology and Food Resources);
- Jobs and Careers (a topic applicable to all the study fields)

The fact is that the students were offered help from the side of the teacher, either with the choice of the topic or the project preparation, and in terms of some difficulties with pronunciation or vocabulary. Despite the positive relationship between the teachers and learners, a few students questioned the teacher regarding the project. However, the surprising fact was that only a few students did this. This proved the fact that Slovak students even in higher education are still not used to viewing teachers as advisors, helpers and partners.

Further on, in the following thematic classes students worked with the necessary vocabulary, accompanied with short texts; role plays and activities developing their grammar and both productive and receptive skills.

The first project presentations were very insecure but later on, the students got used to presenting and discussing their ideas with the audience. The other students filled in the project evaluation sheets. The presenting students handed in the self reflection form with their answers on the time and effort put into the project preparation, also with the confession of the attractiveness of that type of language education.

Regarding the forms of the projects, the majority of the students chose to use Power Point Presentations, there were few posters and only one printed composition resembling more a seminar work rather than a university project.

From our point of view, most of the projects were really creative and some of them were really a contribution in the field of new information within the given topic. The positive experience was mostly with the presentations of the students from the higher grades. They had no difficulties in using specific vocabulary and first of all, the most pleasant feeling was to see how skillful they were in presenting acquired professional knowledge in other subjects (garden design, nutrition, technology, etc.). As the students' forms revealed, most of the students found the preparation of the projects interesting and preferably used internet sources. Regarding the level of English, most of them were careful about their pronunciation, with some grammatical inaccuracies but acceptable to this level of English. Even if the project was prepared by a team of 3 people, all but one equally contributed in the oral presentations.

In a focus group, the students were asked to express their opinions on using projects within ESP. They claimed that when compared to the traditional way of English classes they had been exposed to in the previous terms, the project classes were more interesting and they had been actively involved. Despite some discomfort before presenting in English at the beginning, afterwards they appreciated the valuable experience to present in a foreign language. This experience made them more confident not only in English but also in their presentation skills.

On the other hand, they also admitted that they felt better acquainted with the topic they had chosen for the project; and they did not learn as much from those passively watched and listened projects. Secondly, they criticised the topic limits. In the future they wished to have more freedom in the choice of the topic. One of the drawbacks was also the evaluation of the projects by the students. Most of them were very generous to their

colleagues and did not evaluate the projects according to the set criteria. Very often, the self-reflection forms of the presenters were more critical than those handed in by their colleagues. To conclude, from the point of view of the students, the projects within ESP required extra time and effort but the result was mainly positive and the students found the work interesting and challenging.

Focus Group in the research

According to the theoretical background described previously, the authors followed the principles of the successful focus group procedure. It was held in a classroom where the chairs and tables were organized in a circle in order to allow more open communication and to develop a friendly atmosphere. Dr. Prokeinova from the Department of Statistics, one of the authors acted as the moderator. The students met her for the first time at the focus group meeting on purpose. We assumed that it would not have been a good idea if the teacher = researcher had also been a moderator due to a personal involvement with the students even though it was mentioned in the previous studies. It turned out that we were right. Each focus group session took approximately 30 – 40 minutes. Everything was recorded with the prior consent of all the participants in the research. The transcripts of the focus group meetings were analyzed and interpreted through SWOT analysis which answered the questions of the strengths, weaknesses, opportunities and threats of project work implementation within ESP classes from the point of view of the students. The full transcripts of both focus group meetings with the analyzed results shown in the SWOT analysis are below.

Transcripts of focus group questions (M=moderator, S= student, students)

Focus group 1

M: How did you find project work in comparison with a traditional approach?

S: First of all, it was more interesting.

M: In what way? What exactly did you like?

S: Mainly the fact, they we worked deeply on one topic and we did not memorize nonsense texts.

M: Did you have a problem to present yourselves?

S: Mainly, when I saw it for the first time when I started presenting. (irony)

Note: he worked in a team where his colleague accomplished the project.

M: What did you like more about project work?

S: It was not so strict, we had chosen the topic according to our interests and thus I learned what I wanted

M: Why did all of you use Power Point for your presentations? You had more options: poster, comix, product...

S: It is not possible to put so many facts on a poster, PPT covers all, pictures, texts and its more exciting.

M: What would you improve?

S: More time for the project preparation.

M: Were you able to absorb presentations of more projects during one class?

S: More than three were too many.

M: Did you ask your colleagues questions on the topic of their projects?

S: Only a little...sometimes there was nothing to ask.

S2: We did not ask because we knew that we would also soon present and we didn't want to make discomfort to our colleagues.

S3: Sometimes we agreed on the questions before the class.

M: I don't know if that is the correct way!?

S: I think, it is OK because if someone can answer the question, even prepared one, it means that he/she can respond.

M: But in real life you can hardly predict what you will be asked. Was vocabulary a problem?

S: Definitely yes. At the end of the presentation there was usually a list of new words.

M: Do you use projects also in some other classes?

S: Yes, we do. We prepare seminar works and then we present them.

M: Will you use the vocabulary you learnt in other specialized subjects?

S: Mainly when we were working with materials for our topics we learnt a lot from our study specialization.

M: What would help you to ease the atmosphere during presentations?

S: It was stressful...Maybe if the group was smaller.

Focus group 2

M: Had you ever learnt with projects at your secondary schools?

S: We were writing more seminar works but we rarely presented them and in case we did, it was mostly once a month or never,...it depended on a subject.

S2: We put down vocabulary after reading the text and reviewed it.

M: Do you prefer more project presentation as a way of assessment rather than writing tests?

S: Presentation is better cause we could have prepared for it.

M: Was it better to present individually or in a team?

S: I think everyone prefers it differently.

M: Was it better for you to study so many new words within one topic rather than cover more topics with a more limited amount of vocabulary?

S: When I prepare a project, I learn at the same time... but it was worse and more passive when I listen to it.

S2: I made notes after each presentation but then I did not use it actively anymore.

M: Why did you all present in PowerPoint? You had more options: Posters, Comics...

S: It is easy and it's standard.

M: Did you ask your colleagues any questions after their presentations?

S: Sometimes we listened to more presentations on one topic and there was nothing to ask.

S2: We did not want to make it unpleasant and stressful for a presenter.

S3: Some of the topics were simple and general.

M: Would it be better if everyone had chosen their own topics?

S: Probably yes.

M: On presentation. Was it stressful for you?

S: It is about experience. If you present more often, you are less stressful.

M: Do you use projects also in some other classes?

S: Rarely. It would be better if it was more often. If I feel comfortable within a topic, it is not a problem but in English it was stressful for me.

M: Would you suggest any improvements?

S: Everyone should choose his/her own topic and work on his/her own.

M: Was the task division within a team fair?

S: Yes, we tried to be fair.

SWOT Analysis as a tool of Focus group evaluation

Focus Group SWOT analysis of the students learning English for Specific Purposes through projects.

<p>Strengths</p> <hr/> <p>Students' positive attitudes towards projects</p> <hr/> <p>ESP vocabulary extension</p> <hr/> <p>Students encounter project education also in some other classes</p> <hr/>	<p>Weaknesses</p> <hr/> <p>Poster</p> <hr/> <p>Vocabulary</p> <hr/>
<p>Opportunities</p> <hr/> <p>Students focus on a particular problem Every student should work on his own topic</p> <hr/> <p>Stress when presenting in front of the class.</p> <hr/> <p>ESP vocabulary extension</p> <hr/>	<p>Threats</p> <hr/> <p>Number of projects (presentations) within one class.</p> <hr/> <p>Stress and discomfort when presenting.</p> <hr/> <p>Vocabulary</p> <hr/>

Source: Own research

As we consider strengths and opportunities to be a positive part of SWOT analysis, we joined ideas and opinions of the students into one group. Particular opinions and thoughts base from the recordings realized by Focus Group in December 2010.

Strengths and Opportunities

Learning and teaching through projects is a strong instrument of more effective education in comparison with the traditional approach. Many authors confirmed this hypothesis.

Students positively perceive project education

For them it means a more interesting form of study in comparison with the traditional approach. Students become demotivated by a “classical textbook” in a foreign language and the book becomes an ineffective instrument in the class.

In the recent times of multimedia, it is really difficult to work with a textbook as a main source of knowledge.

Attractiveness and increasing interest can be counted among strengths of the project work. They are forced to be creative and therefore it makes them think differently on the subject.

Students focus on a particular problem

Regarding the fact that the students are in mixed groups, from different faculties and even different years of study, it is quite difficult for a teacher to select appropriate topics to cover in English classes.

Project education allows students to focus on their field of interest, or an issue which is also in his/her study field and, at the same time, they enrich their vocabulary within English for Specific Purposes on the particular topic.

They selected topics according to their study specializations; they did not consider the conditions for project creation to be strict and unreal.

“I definitely prefer the possibility to give presentation in PowerPoint.” This was the most popular type. The problem was also the fact that many students do not have an idea what a poster is therefore they preferred a PPT presentation. The devices of PowerPoint give them supporting “hints” and they get help via presenting in case they have lost the text or context. Last but not least, there are many great presentation effects and graphics which area not available in a poster and therefore posters are not very eye-catching for students.

Students encounter projects also in other classes

Today, presentation through projects is very common at our university. The main aim of projects is: to cut down memorizing and, at the same time, support creative thinking; and learn how to present in front of other people.

Vocabulary Extension

Students admit that while listening to a presentation they acquire even unwillingly new vocabulary which remains in their minds. By working on their own projects students positively stated that they enriched their vocabulary with a lot of useful words. Due to the fact that they had to go through many references, translate some of the texts in order to understand all the necessary vocabulary and, eventually, learn and fix it for the act of performance.

Every student should work on his/her own topic

The main problem with team work is its weakest element, and that is a student, who free-rides on the work of the others. The given situation is permanently repeated in each group and it is not possible to prevent it. The more hard-working ones in a group do not want to let down the weaker one and therefore they work for him/ her. The only possibility of how to also make the slow students to make an effort is to set the task strictly: Every student has to present his/her part of a project. It is not possible to control students whether they worked on a project or not but it is quite clear when they present it.

Weaknesses and Threats

Poster

The given issue has been discussed above. The poster is not interesting from the graphic point of view of our students. They consider the main problem the fact that it is impossible to include an adequate amount of information there.

Number of presentations in one class.

An average presentation should take around 5 to 10 minutes. A discussion follows which in some cases, is limited, but in others, follows a vivid talk which is the main effect of project education. The discussion depends on **a lot of factors**:

Only the most important ones are mentioned which were stressed by our students. Firstly, it is **vocabulary**. If a student does not have the adequate vocabulary he/she is not able and willing to discuss. Another factor threatening a discussion is **no interest from the side of students** listening to a presenter.

A topic is not interesting for them and thus they have no reason to respond to a presentation. Psychologically, the most interesting reason of

having no interest in a discussion was the following reason: “We did not want to make any discomfort to our colleagues and we knew that soon we would be in a role of a presenter.” **Students’ empathy** with a presenter is very typical for Slovak students. It could be negatively perceived from the point of view of knowledge. Students do not want to “bother” their colleagues but, unfortunately, they do not realize that they deprive themselves from a possibility to experience a performance which may be in their future part of their profession .

Part of this “cooperation” was also giving in the prepared questions to the colleagues beforehand with the aim to “satisfy” a teacher that they are able to answer any queries. This is also the space for pedagogues to work on changing their way of thinking into: “How will I react if I do not know how to answer?” It probably needs some time and it will certainly need a change in approach starting in the elementary level of schooling. It could lead to a positive change in approach within higher grades of education.

The last factor is **attention span**. For every person it is quite demanding to focus attention for a long period of time. Students claimed that the maximum number of presentations should not exceed 3 per class.

Stress from presentation

According to our results, the worst thing for the students was to overcome stress and present themselves in front of their colleagues. Everybody has a certain amount of self-esteem and assertivity allowing them to give performances in front of the public.

Students assessed this moment negatively – it was very difficult to present in front of their classmates using English, although, some of them admitted that it would be problematic to do so even in Slovak. Few of them had presented before so they got used to that feeling in front of the public. Another disturbing moment for the students was a high number of students in a group. Fewer students in the classroom would be more welcome.

Vocabulary

Students negatively commented on acquiring passive vocabulary. The professional vocabulary they heard had no impact and thus they did not remember it. The problem was also in the fact that they heard some specific words only once and then they were exposed to some new words.

If a student was from the Faculty of Engineering, the vocabulary he uses is not very useful for a student from the Faculty of Agro-biology and Food

Resources. However, this is a problem of homogeneity of a group which could not have been influenced at the time of research.

Positives and Negatives of using the Focus Group method in Research

In the research at the Department of Professional Language Education of the SUA, the focus group meetings had a great impact in reaching the aims. They allowed the researchers to evaluate a new teaching method from the point of view of the students within a reasonable time. It was possible to develop their opinions by asking more detailed questions in order to gain very valuable views on project work in language education. By expressing their attitudes the students felt important and enjoyed the position of being partners in the evaluation and management of the educational process up to certain point. Also through the discussion the relationship between the teacher and students reached a higher, more open level.

The negative side of the mentioned focus group method was that still a lot of students do not openly express their ideas. Some of them are very shy and pretend they have no opinion on the subject which seems to be quite a big problem. According to us, the students have not been taught or provoked to express their ideas openly from a very young age.

As for the recommendation, the success of a focus group meeting depends on the size of a group. In our case, it should have been lower, maybe then the students would feel more open and communicative. The point, which has been already mentioned, about a moderator who was not the teacher, appeared to be more objective.

Conclusion

In the paper we tried to approach the focus group method from a theoretical point of view, through its use in educational research in different countries ending with our personal experience of using focus groups as a one of the methods in our own research at the Slovak University of Agriculture in Nitra.

The first part of the paper focused on the theoretical base. The use of focus groups as a relatively recent research method was developed in the world of business, especially the field of marketing. Later on, after the positive outputs it spread to other fields of science. We mainly focused on its use in the field of education as both authors are university teachers at the Slovak University of Agriculture in Nitra. Our goal was to characterize this

method, describe its process and data processing as well as its positive and negative sides. We cited more authors in order to have a wide spectrum of ideas and opinions on the topic.

The second part presents the particular examples of focus group uses in educational research in different countries: Spain, Scotland and Australia. The aim was to show the widespread use and positive outputs of using focus groups. The third one slightly differed from the previous ones and its main focus was to show the combination of modern technologies in data collection and processing within a focus group method.

The third part of the paper describes the research conducted at the Slovak University of Agriculture in Nitra. The use of focus groups was one of the methods used in the research of the use of project work in ESP. The aim of two focus group meetings was to find out students' opinions on the use of projects in language classes. The transcript of questions is included in order to illustrate the practical use of focus groups. The results were processed and analyzed with the help of a SWOT analysis. To summarize, the focus group method has been successfully used by the authors in their research and they can positively recommend this qualitative tool to be used in educational research.

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Abstract

In the paper we focus on the use of focus groups in educational research. In the first - theoretical part, we introduce focus groups as a useful instrument of qualitative research with its historical background. There are a few overviews of the focus group method with its possible uses, as well as its advantages and disadvantages. Then, in the second part, we describe three projects where focus groups were used as a research method in education research. The first example looks at focus groups used in the research on educational reform in Spain, the second one focuses on the focus group used by the Scottish Council for Research in Education based on opinions of the lifestyle in Scotland. The last one slightly differs from the previous two. Using ICT to assist in meaningful data collection, the research carried out by Moyle K. at the University of Canberra gives another positive attribute to the combination of computers and focus group as a research method. In this research modern technologies are used to process the data and that is very interesting and valuable advice of how to use the focus group in the research in connection with computers. Eventually, the use of focus groups in research conducted at the Slovak University of Agriculture in Nitra at the Department of Professional Language Education in cooperation with the Department of Statistics is described. The transcripts of two focus group sessions are also included with the final analysis interpreted by SWOT analysis.

Keywords

focus group, qualitative research method, SWOT analysis, English for Specific

Purposes, university students

Extent: 54 256 characters

THE CASE STUDY METHOD IN LANGUAGE PEDAGOGY RESEARCH

Silvia Hvozdíková

Introduction

The case study method as a research method is designed to study the uniqueness and complexity of a single case. It is one of the methods of qualitative research mostly used in social sciences. We may study a single case if it is itself very interesting or the circumstances and the setting are of great interest to the researcher. In our study we will focus on a case study in educational settings and develop the idea of using case studies as a method when evaluating interventions in the classroom when teaching foreign languages.

First, we explain the theoretical background of the case study method in its complexity and then we develop the idea of using the case study method specifically in the field of language pedagogy. We discuss the opinions of various authors mainly from the English and American research environment (Bassegy, Yin, Stake, Riley-Tillman, Burns, and Silverman), as well as Slovak and Czech researchers and theoreticians (Gavora, Ferjenčík, Hendl and others). We have based our discussion of the issue mostly on English writers who conduct their research using the case study method in various fields of social sciences. In the final part of the study, we analyse what are the views, challenges and limitations in using the case study method in education.

The case study method is a qualitative methodology that looks at individuals or small groups, cultures, subcultures, and other phenomena. It discovers various relationships, interactions, atmospheres, group dynamics that define them. It offers a holistic and in-context view on the researched phenomenon. The descriptive nature of the case study methodology offers an appropriate approach to language pedagogy research where the main emphasis is laid on individuals or groups of individuals learning or teaching languages. The low number of participants in the research allows the study to explore the phenomenon in a more detailed way and it may provide more data for exploration.

History of the case study method

The case study method has been in the field of research in social sciences for a long time. In the 1920s it was developed as a method of direct research to study one issue or one or more individuals. Park, a well known novelist and a news paper writer, encouraged researchers to go to the slums, to sit at the hotels, to go to the parks and observe the individuals, the atmosphere, the environment, the behavior, talk to the participants of the research. It came from the idea to have real-life contact with the studied individuals and with the cases. Only when this individual approach is applied to the observed cases may real people and their behaviour in real and natural environments be realised.

Over the period of several decades its use spread immensely among sociologists, historians and anthropologists. They usually worked with their work-cases and conducted their research with individuals. This work of sociologists was defined as “scientific” and the uniqueness and variety of every human experience which is difficult to generalise was stressed.

However, the method of a case study has had its critics from the beginning. It is criticised most often for its unscientific conclusions as well as its lack of valid and reliable evidence. Moreover, for its lack of generalizable conclusions it is also applicable to other scientific laws. It is criticised because as they state it lacks direct static facts and data that could be defined as scientific data.

Nowadays, the case study method is mostly used in social sciences, namely: ethnography, business, history, sociology, economics, politology, education and others. Moreover, researchers choose to conduct case study research when they are focused on the research of individuals, small groups, organizations, relationships, decisions, communities, etc. (Yin, 2010, pp. 32-33). Researchers really need to have a “case” to study. Many times the case study method is misused when it is planned to analyse only an idea or an argument not a real-life situation.

Contemporary definitions of the case study method

Stenhouse(in Bassey, 2010) claims: “Case study methods involve the collection and recording of data about a case or cases, and a preparation of a report or a presentation of the case. Sometimes, particularly in evaluation research, which is commissioned to evaluate a specific case, the case itself is regarded as of sufficient interest to merit investigation. However, case study does not preclude an interest in generalization, and many researchers seek

theories that will penetrate the varying conditions of action or application founded on the comparison of case with case. Generalisation and application are matters of judgements rather than calculation, and the task of case study is to produce ordered reports of experience which invite judgement and offer evidence to which judgement can appeal" (Bassey, 2010, p. 24).

Furthermore, Sturman offers a more holistic view on the definition of the nature of the case study method when he states: "Case study is a generic term for the investigation of an individual, group or phenomenon. While the techniques used in the investigation may be varied, and may include both qualitative and quantitative approaches, the distinguishing feature of the case study method is the belief that human systems develop a characteristic wholeness or integrity and are not simply a loose collection of traits. As a consequence of this belief, case study researchers hold that to understand a case, to explain why things happen as they do, and to generalize or predict from a single example requires an in-depth investigation of the interdependencies of parts and of the patterns that emerge" (ibid, p. 26).

Yin (2009, p. 18), possibly one of the leading representatives of theoreticians and researchers of the case study method used in social sciences defines case study as follows: "Case study is an empirical inquiry that (...) investigates a contemporary phenomenon in depth and within its real-life context, especially when – the boundaries between phenomenon and context are not clearly evident." He continues: "The case study inquiry – copes with a technically distinctive situation in which there will be many more variables of interest than data points, and as one result – relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result – benefits from the prior development of theoretical propositions to guide data collection and analysis."

Simply, if a researcher desires to investigate a real-life situation in a deeper understanding the case study method is suitable. The case study method investigates both, the specific real-life situation and its context. The reason why the case study method is used in social sciences is the need to research both, which is not always possible to select or distinguish.

Stake (1995, p. 2) explains that a case may be a child, a teacher, a programme but the teaching style of the teacher may lack boundaries and may not be called a case study. All schools within a nation may be called a case but the policies of school reforms are less likely to be called a case. He claims that a case is a complex and specific functioning thing. The case is an

integrated system. The parts do not have to be working well, the purposes may be irrational, but it is a system, thus people and programs clearly are prospective cases. Events and processes fit the definition less well, and studies of them are less likely to capitalize on the methods discussed in this book.

Based on Hendl's (2005, p. 34) claims "case study research is the opposite of statistic based research conducted in quantitative research – it is a collection of a small number of data about as many cases as possible. A case study is based on the collection of as much data as possible about one case or a small number of cases. The basis of this approach suggests that we learn about other similar cases through studying one case deeply in its complexity." According to Ferjenčik (2000), the case study method is a nonexperimental type of research. He claims that case study research is aimed at a one person study, which means the sample is $N = 1$. In his understanding case study is a longitudinal research of one chosen person. Furthermore, the aim of the case study is to research and understand behaviour or changes in behaviour, comprehend the dynamics of his or her individual development, his or her diagnosis, his or her interaction with the environment, and so on. Moreover, Ferjenčik states that it is necessary to get in direct touch with the case/the person or study his or her documentation together with interviewing any people who are in touch with the case. He also underlines the difficulties in generalizing the outcome data and proclaim standard results valid in further context. His perspective of the case study method is more taken from the psychological perspective than educational.

Merriam (in Nunan 1992, p. 43) defines the case study method as an intensive, holistic description and analysis of a single entity, phenomenon or a social unit. The case study method is descriptive, heuristic and relies heavily on inductive reasoning in handling multiple data sources.

Based on American terminology single case design (SCD) is a class of experimental methodology that has been utilized in a number of disciplines including education and psychology. It is known by a number of names: single subject, intrasubject, and also $N = 1$ (Burns, Riley-Tillman, 2009, p. 9).

A case itself co-notates a unit observed at a single point in time or over some period of time. Each case may provide a single observation or multiple (within case) observations. A case study may be understood as the intensive study of a single case where the purpose is to shed light on a larger class of cases/population (Gerring in Riley-Tillman, Burns, 2009, p. 58).

Based on the definitions we may agree that a case study is focused on closer, deeper or wider researching and understanding of a single case, a situation, a subject or a phenomenon. Moreover, the study of a case in its complexity develops the possibilities to differ between the circumstances of the studied subject and the subject itself. By studying the case or several cases within one study from many and various possible angles researchers may come to a variety of conclusions and interpretations. Case study is descriptive in its nature and includes a lot of investigating, analysing and interpretations. Thus, this is usually possible in qualitative research only because it analyses various circumstances and conditions in which the subject or more subjects exist. Furthermore, the case study research puts its emphasis on understanding the case as opposed to explaining the case.

Typology of a case study method

Various authors introduce various classifications of the case study method. We highlight several types of the case study method and how it is viewed by the researchers and writers who carried out several case studies over the last number of decades. Case study research may be initiated and conducted in one way or another. Based on the nature and objectives of the study and research researchers choose the most appropriate type. There are several included in this study. Generally we may state that there are two basic types of case study method:

- a single case study method focusing on one single phenomenon or an individual within the school environment; it may include a teacher, a student, a child, a headmaster, a teaching style, a teaching practice, a curriculum, etc.
- and multiple case study method focusing on more than one case or a group of individuals; it may include a study of a class, a group of individuals interconnected by age, behaviour, language skills, etc. The faculty of a school, etc.

Based on typology of Stenhouse (in Nunan, 1992, p. 23), also evaluative case study research is included in the basic typology of case studies. He emphasises the in-depth investigation of one case or group of cases in the evaluative type and it includes the evaluation of policy or practice. It usually includes thorough field work.

According to Bassey (2010, p. 8) more types of educational case studies can be identified:

- theory-seeking case study is focused more on the issue or problem than on the specific individual, specific case; this type is observative and descriptive in its nature;
- theory-testing also focuses on the phenomenon more than on an individual specific case or cases; it is rooted in the in-depth investigation of the phenomenon based on the objectives stated in advance;
- story-telling case study method is a narrative reporting form of outcome data interpretations which usually draws on evaluations of various phenomena based on observations, interviews or studies of documentation; they provide the sense of immediacy to the readers; it may come up with many interesting details and the individuals observed are real people living real lives at the time of research;
- picture-drawing is a very unique form of outcome data analysis carried out in various forms of visual drawings mostly used in pre-elementary or elementary education and also in ethnographic research.

Case study method may also be a part of a mixed research, both qualitative and quantitative. Researchers may also use a combination of several single case studies to develop a multiple-case study research. Many times an analysis or a survey are used as a part of case study method research. Gavora (2010) differentiates between several types of case study research:

- personal case study;
- a community case study;
- sociography;
- social groups case study;
- a study of an institution or organization;
- studying of roles, relationships, and phenomena.

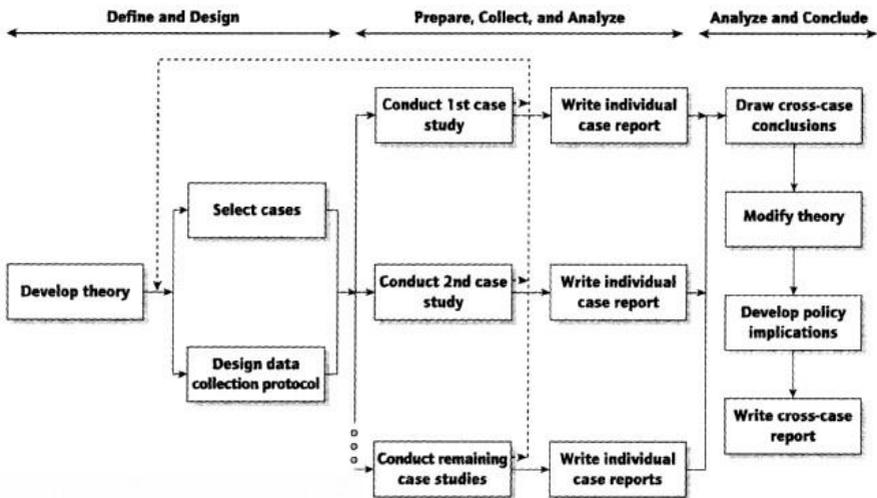
Stake (1995, p. 3) demonstrates the division of cases using several examples. The simple study of an individual pupil having difficulties in the class is a case or when educational programs newly applied at schools in the country are studied and analysed. The aim is to learn about the program about the specific and particular case. This is called *intrinsic case*.

How to define and design a case study

Yin (2010, p. 52) divides case studies into several groups. The essential two groups are 1. single-case, and 2. multiple-cases designs. The single case study method is justifiable under certain conditions. It is only realizable if a)

the case is testing an existing theory, b) the case is very unique or rare, c) the case is very typical and representative. It is essential to prepare the case, the unit, to presuppose a definition or a study question before the research is conducted. Yin claims, that one study may consist of more than one case. It is called multiple-case study. In such a situation research must include replication. He also suggests the following design for the multiple-case study method. He considers multiple-case study method and single-case study method as one methodology framework without any further or broader distinctions.

Fig. 1: Design for the multiple case study



The replication may be exactly the same, it means it copies the same study two or three times, or it may also mean that several different cases are studied. For example, a single case may be a study of the school in general but several other cases of individual students may complete the range of multiple-case study. Replications occur when research is aimed at the cases of individual students.

Data collection or evidence for a case study

Many researchers struggle with how to collect the data for the case study they would like to conduct and what evidence to use to support the data collection. In research it seems data collection represents a demanding and time consuming part of the research. Many times researchers conducting qualitative research struggle with the basic questions of *how? what?, and who?* In the following section the six main sources of evidence for data as suggested by Yin in his publication *Case Study Research Designs and Methods* are discussed.

He suggests six primary sources of evidence (2009, p. 101) which are explained later in the chapter:

- documentation;
- archival records;
- interviews;
- direct observations;
- participant-observation;
- and physical artefacts.

As he states, all six of them have their strengths and weaknesses as we show them as follows:

Documentation:

- *stable*, can be reviewed repeatedly;
- *unobtrusive* – not created as a result of a case study;
- *exact* - contains exact names, references, and details of an event;
- *broad coverage* – long span of time, many events and many settings;
- *retrievability* - can be difficult to find;
- *biased selectivity* – if collection is incomplete;
- *reporting bias* – reflects bias of the author (unknown);
- *access* – can be deliberately withheld.

Archival records

- *same as those for documentation*;
- *precise* and usually quantitative;
- difficult to *access* due to privacy reasons.

Interviews

- *targeted* – focuses directly on the case study topics;
- *insightful* – provides perceived casual inferences and explanations;
- *biased* due to poorly articulated questions;
- *response bias*;
- inaccuracy due to poor recall;
- reflexivity – interviewee gives what interviewer wants to hear.

Direct observations

- *reality* – cover event in real time;
- *contextual* – covers context of “case”;
- *time consuming*;
- *selectivity* – broad coverage difficult without a team of observers;
- *reflexivity* – event may proceed differently because it is being observed
- *cost* – hours needed by human observers.

Participant observation

- *the same as for direct observation*;
- *insightful* into interpersonal behaviour and motives;
- *bias* due to participant-observer`s manipulation of events.

Physical artefacts

- *insightful into cultural features*;
- *insightful into technical operations*;
- *selectivity*;
- *not available*.

Documentation may include letters, official documents, personal documents, diaries, memoranda, progress reports, and internal records, formal studies of evaluations of the same case as you are studying, news or journal articles and publications. Documentation is essential in any case study in educational settings. It gives the researcher the basis for further decisions. However, it may also mislead the researcher to false objectives because the researcher may unintentionally select only some documents and it is than incomplete documentation. When doing documentation process it is important to realise that the documents we are studying were originally written for a different audience with different objectives than ours.

Archival records include public files, school records, local government records, organisational records, maps of places, survey data, official data about residents, survey participants and employees and so on. When investigating the official data researchers need to be aware of the fact that not all the records they find are of the same relevance. Researchers need to be able to select the records and use them appropriately in the study of the case.

Another very widely used source of evidence for a case study is an interview. We differentiate between a survey and an interview. An interview in a case study is more of a guided conversation with the interviewee than a structured survey. The interviewer has to follow the line of his specific objectives not to be misled and biased by the information received from the interviewee (ibid., p. 108). Interviews are very suitable for qualitative research in education because in education we mostly deal with people, attitudes, emotions, behaviours, and relationships.

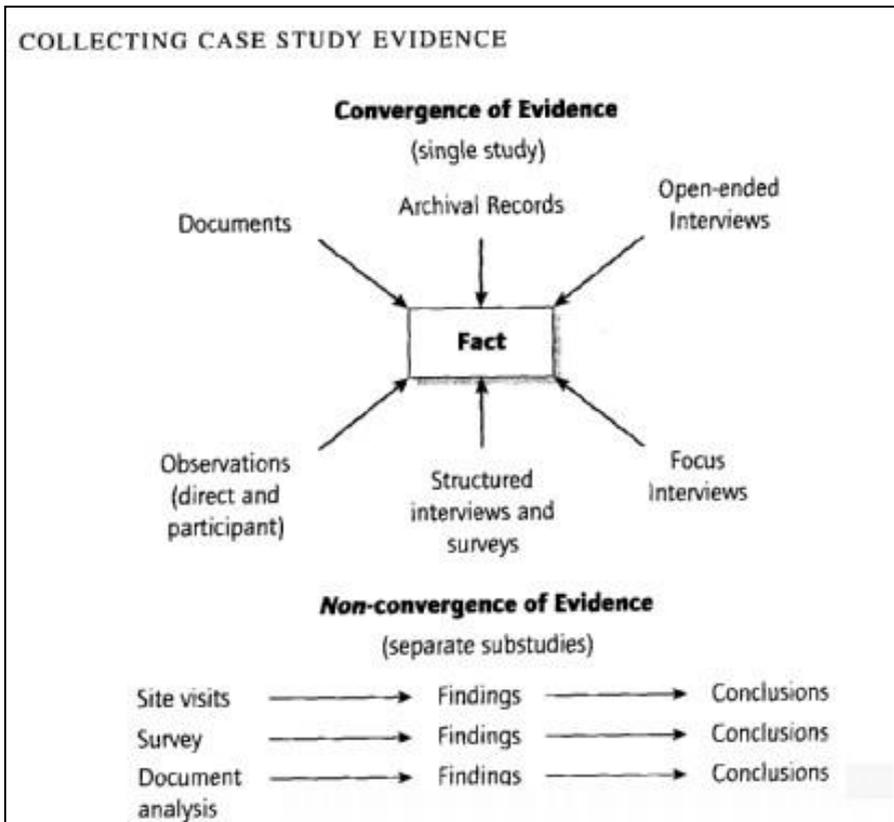
Direct observation is very relevant to case study research because unless it deals with some historical phenomena it is important for a case to watch and observe the situation and circumstances directly in its natural and real life environment. Results of direct observation may support the study of a case immensely. It may introduce a new point of view and even disagreements with the documentation. It is relevant to allow more than one observer to investigate to make the observations more relevant. The fact that the case is directly observed may also change the behaviour of the subject who is being observed.

Participant-observation is a special kind of observation when the observer is not a passive one but plays a role in the situation, in an organisation, being a decision-maker in the settings, being a neighbour in the neighbourhood. It is mostly used in anthropology or sociology. In education we may apply this method in the role of an assistant teacher and assistant educator.

Physical artefacts are a work of art, technology or an instrument. They are a physical form of evidence they are a part of the research and the researcher uses them to develop some kind of broader perspective.

Yin (ibid., p. 117) suggests the following plan for single case method evidence data collection. He develops the idea of gathering facts from many different angles. We already discussed collecting archival records, interviewing the participant(s), observations, studying documents, etc.

Fig. 2: Evidence data collection in Case study research



He divides evidence collecting into two groups: convergence of evidence and non-convergence of evidence. The first is focused on single case method and the second is focused more on separate cases, that he calls sub-studies. By conducting the separate studies, by visiting the place, doing surveys and document analyses we may get to evidence of outcome data. However, it is important to include as many data analyses as possible to make the outcome results reliable and valid. Thus, the variability of methods used in evidence collecting for one case study supports the trustworthiness of the case study results.

Švec et al. (1998) also define three essential research methods how to conduct case study research. He suggests the following: *direct observation*, *interview*, and *documentation analysis*. The direct observation he states has

two basic purposes. The observer can directly observe the atmosphere and at the same time they are present there and experiencing it. They may also use intraspection when observing the environment and at the same time they focus on the actual experience of the setting.

The method of an interview as he describes provides a very suitable tool for theory testing. Interviewers may test with an open end interview if the objectives or presumptions they initially made are applicable and valid. Considering document analysis the researchers focus on school curricula documentation and individual artefacts or works of studied individuals.

Every research of a case study is a mixture of methods and sources of evidence. A case study is incomplete if it only provides an analysis of documents or results of a single interview. The study of a case if it intends to be relevant and reliable should be a multiple method study. To provide any further information for researchers with relevant data the research of a case should be put in a database or a narrative. It cannot be only a simple data collection report. We will focus on the reliability and validity of case study research in the following subsections.

Analysis of case study evidence - four general strategies

Considering the context of data analysis, it is probably the most challenging and most difficult part of the case study research. It requires several analytical strategies and techniques. Miles and Huberman (1984) suggest to rearrange the arrays, place the evidence in a specific matrix of chosen categories, create data displays, visually organize-scheme frequency of different observed events, examine the relationships between the variables, put information into chronological order or use some other temporal scheme. Stake (1995) along with Yin (2009) recommends to divide the research results into categories as another means of analysis and suggests to create a protocol for this phase of the research to enhance the quality of the research. He also suggests the idea of pattern matching within the analysis of the evidence collected.

Yin (ibid.) defines four primary strategies to analyze the evidence for a case. The first strategy relies on theoretical propositions. It is a theoretical orientation which guides the case study from the start. Furthermore, it helps to organize and carry out the individual steps of the entire research. It is also easier to examine the results and explanations when the research is planned and propositions are correctly defined.

The second strategy suggests developing a case description. The researcher must have a descriptive framework prepared for organizing the case study. It may not necessarily be a descriptive framework but a descriptive framework can help to analyze some of the goals of the research. The framework leads from the initial descriptions to the later enumerations, tables, and schemes leading to various essential decisions made about the evidence of the research.

The third strategy uses both quantitative and qualitative data. When researchers use both strategies for data analysis the results of the research is more valid and enhances the final evidence of the research. Quantitative analysis may seem to diverge from the case study research but when we imagine a case study about a student's reading skills or his or her level of stress when being tested, his or her test results and marks for a certain period of time is a basis for further development of the research. Thus, the results should be put into a table or a scheme, which involves some statistical knowledge of the researcher.

The fourth strategy includes examining rival explanations. For example, it happens very often that a novice researcher concludes the observed outcomes of the research were direct results of the intervention. However, the researcher has to be aware of many possible other influences. The researcher should then try to collect evidence for any other influences that have shaped the outcomes of the research. To conclude a case study research it is vital to collect as many supporting results and data as possible. This fourth strategy includes elements of all three previous strategies.

Reliability and validity of a case study

In order to support validity and reliability in case study research we need to employ triangulation. Triangulation means using more than one source or method of results examination within one case. Bogdan and Biklen (2006) define triangulation as "a powerful technique that facilitates validation of data through cross verification from more than two sources. In particular, it refers to the application and combination of several research methodologies in the study of the same phenomenon." Furthermore, they state that triangulation:

- Can be employed in both quantitative (validation) and qualitative (inquiry) studies.

- Is a method-appropriate strategy of founding the credibility of qualitative analyses.
- Becomes an alternative to traditional criteria like reliability and validity.
- Is the preferred line in the social sciences.

Considering the combination of the methods and raw materials as another source of argument and another source of evidence it may build up trust and can support the argument of a case study researcher. Moreover, Cohen and Manion (2000, p. 254) define triangulation as: „an attempt to map out or explain more fully, the richness and complexity of human behavior by studying it from more than one standpoint“. They give us a more holistic approach to triangulation. They intensify individuality and complexity of human experience and human behavior. Considering that case study research is aimed at the study of human behavior, it is essential to view it as fully and deeply as possible. Triangulation offers a very reliable alternative to a single method study.

Considering the validity of the case study research method there are more concerns. One of the concerns is the question whether the research really investigates what it aims to investigate or observe. One of the general worries with the case study method is if the outcome data are really applicable for general problem solving situations or other individuals or group of individuals or if the generalisations made are applicable beyond the investigated case. However, researchers conducting case study research argue that when contrasting a case study with survey outcome data, for example, they use analogy with selected sample for a survey; is it really generalizable for the larger units of individuals?

Case study in Language Pedagogy Research

Using the case study method is a very suitable type of the research method in many fields of social sciences. However, it is our primary aim to develop the idea of the case study in language pedagogy research settings specifically. In this chapter we support several arguments why to use the case study method in language pedagogy research.

Language pedagogy research is very often aimed at a problem-solving situation, at data gathering, at the application of various theories, methods, techniques or they challenge the theories, or even create new theories or teaching styles and practices. It often focuses on checking various skills, curricula or it observes second or foreign language competence.

There are three possible arguments that support case study research in language pedagogy in schools (Riley-Tillman, Burns, 2009, 18):

- It is just not feasible to treat every question in an experimental manner.
- Traditional experimental methods are not considered realistic in schools.
- The goal of language pedagogy is not to produce generalizable knowledge but rather to educate children, teach them language and it is not something that can always be quantified.

As Bassey (2010) states case study research has to be conducted well so that it provides the researcher with specific data that allows him to:

- explore the significant features of the case;
- create plausible interpretations of what is found;
- test the trustworthiness of these interpretations;
- construct worthwhile arguments or stories;
- relate the worthwhile arguments or stories to any relevant research in the literature;
- convey convincingly these arguments or stories to an audience;
- provide an audit trail by which other researchers may validate or challenge the findings or construct alternative arguments (Bassey, 2010, p. 65).

Bassey (*ibid.*, p. 67) divides case study research into seven stages:

1. identifying the research as an issue, problem or hypothesis;
2. asking research questions and drawing up ethical guidelines;
3. collecting and storing data;
4. generating and testing analytical statements;
5. interpreting or explaining the analytical statements;
6. deciding on the outcome and writing the case report;
7. finishing and publishing (2010, p. 67).

After deciding on the issue researchers should focus on collecting vitally important data and discussing them. Probably the longest and the most time consuming phase of such research is generating and testing analytical questions and interpreting the data. Researchers have to make it understandable and trustworthy for the audience. When conducting case study research it is essential to focus on data collection and data analysis.

There are several basic ways how to collect and analyze data in case study research. It seems logical to ask questions, listen attentively to the

answers, observe and read official or private documents. Furthermore, researchers need to spend some time with the individual, or the case, that he or she is researching. If it is a school, the researcher should spend time and observe the atmosphere at the school, if it is an individual, spend some time with him or her, and get to know them. It is vital for formulating conclusions and publishing final statements about the cases. Usually asking questions and observing are conducted at the same time. Sometimes answers to many essential questions are collected when discussing common everyday issues about life, learning, teaching, etc. Should the observations and the interviews be trustworthy and really life-like they have to be conducted in a friendly and stress-free atmosphere. Especially, when we observe or interview individuals, who are not used to communicating with unknown people (researchers). When observing pupils, probably the best way is to make their own teacher observe them and then interview her or him. Pupils are used to their own teachers and behave much more real than if they were interviewed or directly observed by an unknown person.

In terms of the most common method for many research methods, reading documents, it means collecting as much significant data and information as possible. It is important for the researcher to learn from the history of the case and all possible side influences of the case. Reading data includes studying official documents, personal diaries, etc.

An intervention in case study method in language pedagogy

In the following section we would like to draw the readers' attention to an intervention as used in language pedagogy research. According to Gajdošová (1997, Stranovská, p. 184): "intervention means a change in the current relationship between an adult and a child in order to improve it." Intervention may be intended to modify the way an individual behaves or the way she or he learns, to change his or her self-perception, self-understanding, to modify the environment or the system that the individual works in or lives in, for example: school, family, and class. Moreover, Riley and Burns (2009) define intervention as a planned modification of the environment made for the purpose of altering behaviour in a pre-specified way. They continue that an intervention can be at both, the whole-school (curriculum) or individual levels. Since interventions are pre-planned modifications to the environment, the method with which they are planned is equally important as the target. The case study method is not used in our environment much. However, when

the case study method is applied in educational settings specifically in language pedagogy, professionals may defensibly document the effect of interventions. Educational systems in language pedagogy that embrace problem-solving orientation (foreign language acquisition, foreign language competence, styles of teaching, teaching practices, and so on) require statements about the effectiveness of an intervention. Especially in that case if they complete planning based on the intervention and they need some back up data.

Intervention is a modification of the class environment or teaching styles and researchers may use the case study method when applying this shift or change in the language classroom and then observe the possible changes or shifts. It is understood as a process for developing the language competence and general foreign language skills. It is especially useful and reasonable when a situation appears in the language learning process that needs to be solved or changed. By applying the intervention observers may investigate the changes or shifts in teaching and learning processes. Intervention is a process which is applicable in both qualitative and quantitative methods of research depending on the purpose or objectives of the research.

Based on the purpose of case study there are three basic conditions in investigation of the reliability of the intervention in the language classroom in case study research (Riley-Tillman, Burns, 2009, p. 9):

- if there is an important change in some dependent variable;
- if the observed changes in the outcome data post application of the independent variable is a result of the application of the independent variable;
- if this change is something that is generalizable across time, setting, and target.

When we apply these objectives to the language learning environment using the intervention, we recognize three general purposes:

- the outcome variable changed when the intervention was implemented;
- the observed change was observed due to the implementation of the intervention and only the implementation of the intervention;
- the information learned from this educational intervention can be generalized to other similar educational problems and settings in the language learning process.

When a failure or a success of an intervention is used as evidence, we may be sure that it was the method (intervention) that caused and created the effect rather than some unknown external factor. In the relationship between the intervention and the outcome data experimental control is difficult. It is necessary to document the causality. Without reasoning and accountability a single case design is not defensible (Riley-Tillman, Burns, 2009, p. 65).

The third goal is regarding generalization. Is it possible to use the same intervention with the same child in the future or is it possible to use the same intervention with another child with similar problems. The only way how to confirm the validity of the intervention and the outcome data (own research conclusions) is systematic replication (Riley-Tillman, Burns, 2009).

A research plan for a case study using an intervention method is introduced as follows (Riley-Tillman, Burns, 2009):

Step 1: *Developing a hypothesis*: three important elements: a. an independent variable (a set of experimental conditions that is expected to bring a desirable change in the participants, i.e. half-day pre-school education as compared to full-day pre-school education, it is critical to define it well), a dependent variable (the target behaviour, it is a clear statement of the behaviour that will change as a result of the application of the independent variable), and a statement of the direction of the expected change (a clear statement about i.e. positive relationship, increase, lesser gain.)

Step 2: *Observation of a functional relationship for the first time*. This phase is the actual conducting of the research: observing the outcome data with and without the presence of the independent variable – application of the intervention.

Step 3: *Replication*. This phase helps us to make stronger statements about the relationships between independent (the specific modification of the environment or style or practice) and dependent variables (observed individual or group of individuals or phenomena in the language classroom during the process of the modification).

Intervention may be used in the language classroom when there is an intensive problem in adapting to a teaching style, or a problem in general language acquisition of the students, or it may also be reasonable to use when researching learners with difficulties in foreign language learning environments. It is applicable when a suitable modification of the process, style, and practice is observed and investigated in the language classroom.

Conclusion

Case study research is very personal research. Researchers often involve their own personal ideas and perspectives in the summary interpretations. It usually takes a long time, long periods of observations and a lot of data collection and data analysis until a researcher is prepared to create a respectful and relevant case study research. As we took a closer look and aimed our attention at the issue of case study in methodology in language pedagogy in common educational school settings we support the idea of its use in education, specifically language pedagogy. As stated several times in our research plan in education we research and observe human experience, human behaviour, an individual which is itself very unique and variable, that is why it is wise and recommended to use the case study method as a research method in educational settings. From the holistic point of view, if the research aims to be authentic and trustworthy and realistic it should not avoid using the case study method in its procedure.

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Abstract

The study depicts the case study as a method of qualitative research in language pedagogy research settings. It gives an overview of the method, specifies the proper possibilities for its use and relates it to education. It highlights the advantages and also shortcomings of using this research method. It also points out the lack of use of the case study as a reliable research method on a national level in Slovak education.

Keywords

case study, education, research, language pedagogy

Extent: 44 337 characters

DIARY STUDIES AS A RESEARCH TOOL IN INVESTIGATING LANGUAGE LEARNING

Božena Horváthová

To put diary studies into a broader research context Bailey (1991, p. 61) defines them as a form of empirical (data-based) research, enhanced by introspection, in the tradition of naturalistic inquiry. Furthermore, she declares that in naturalistic inquiry people are studied in naturally occurring settings, rather than in randomly sampled groups created artificially for the purposes of experiment, and the analytic categories typically emerge from examining the data (ibid.). Grotjahn (1987, in Bailey 1991, p. 62) categorizes introspective research according to its design, the type of data used and the sorts of analyses involved. Respecting his classification language learning diary studies typically make use of *non-experimental designs, qualitative data, and interpretive analyses*.

The premise for applying diary studies as an introspective technique in researching foreign language learning is the present focus of attention on the cognitive processes of learners which underline their observable behaviour. The reason for using introspective and retrospective methods in language research is the fact that a great deal of the work involved in language development is invisible, going on in the head of the learner. In the next section the opinions of several authors about introspection and retrospection will be discussed.

According to Fry (1988, ibid.) the term introspection refers only to data gathered from subjects while they carry out the task. It means that true introspection can take place only so long as the event is occurring. In contrast, the term retrospection (Bailey, 1991, p. 63) involves a very broad data collection timespan, ranging from immediately after the event to years later. According to Grotjahn (1987, in Bailey 1991, p. 63) introspective methods encompass self-report, self-observation, and self-revelment.

Nuan (2008, p. 115) states: *“Introspection is the process of observing and reflecting on one’s thoughts, feelings, motives, reasoning processes, and*

mental states with a view to determining the ways in which these processes and states determine our behaviour.” Further, he (2008) presents the introspective techniques which are designed to help the researchers to understand how learners think. The term introspection from Nuan’s point of view (2008, p. 115-116) covers both techniques in which data collection is coterminous with the mental events being investigated and research contexts in which the data are collected retrospectively, some time later after the mental events have taken place. He considers the following introspective research tools to be particularly appropriate: think-aloud techniques, anagram tasks, *diary studies* and retrospection (stimulated recall techniques). Cohen and Hosenfeld (1981, In Bailey 1991, p. 63) suggest a compromise between the strict definitions of these two terms and they distinguish three similar categories, each of which represents a band rather than a point: *introspection* (during the event), *immediate retrospection* (right after the event), and *delayed retrospection* (hours or more following the event).

Nuan (2008) argues that diaries, logs, and journals are important tools in language research. They have been used in investigations of second language acquisition, teacher-learner interaction, teacher education, and other aspects of language learning and use. They can be kept by learners, by teachers, or by participant observers. Diaries can focus either on teachers and teaching, or on learners and learning (or on the interaction between teaching and learning).

Moon (2003) differs between learning journals, logs and reflective diaries. According to her these terms are often used interchangeably. However, the purpose of them may differ slightly. When keeping a *learning journal*, the emphasis is on making explicit and recording the learning that occurs. *Reflective diaries* are more concerned with demonstrating reflection on an experience, while *logs* are a record of events that have happened. They usually all have an aspect of reflection in them.

To improve the reflective abilities of learners Moon (2003) recommends second order reflection. It is represented in any technique that requires a learner to look through previous reflective work and write a reflective overview. One of the most convenient ways to do this is the *double entry journal*. Students write only on one page of a double spread or on one half of a vertically divided page. They leave space blank until at another time, they go through the initial material written generating further comments that emerge from their more coherent overview of the initial work.

To sum up what distinguishes a learning journal from other writing is that it focuses on ongoing issues over time and there will be some intention to learn from either the process of doing it or from the results of it.

Bailey (1991, p. 62) considers it important to note that a learner's diary alone, which is only the data, does not constitute a diary study. In order to be considered a diary study a paper must include an analysis. According to Bailey and Ochsner (1991, p. 60):

"A diary study is a first person account of a language learning or teaching experience, documented through regular, candid entries in a personal journal and then analyzed for recurring patterns or salient events. The central characteristic of the diary studies is that they are introspective: The diarist studies his own teaching or learning. Thus he can report on affective factors, language learning strategies, and his own perceptions – facets of the language learning experience which are normally hidden or largely inaccessible to an external observer".

Furthermore (1991, p. 65), she divides diary studies in two groups: (1) those in which the diarist and the analyst are the same person, and (2) those in which the researcher analyses diaries kept by other language learners. Van Lier (In Bailey 1991, p. 65) speaks about direct and indirect data analysis.

Moon (2003) mentions that learning journals/diaries and portfolios are increasingly used in higher education as a means of facilitating or of assessing learning. They have many different purposes and the structure that is introduced needs both to relate to their purpose and to the style of the learner. Generally speaking, they seem to be helpful in personalising and deepening the quality of learning and in helping learners to integrate the material of learning. Further on, she states that diaries can be used either for research or for teacher education. Our prime focus is on using diaries for research purposes. Bailey (1983, 1990) and Bailey and Ochsner (1983, in Nuan, 2008, p. 120) recommend a five-stage procedure:

1. Account of the diarist's learning history;
2. Data collection;
3. Revision for public consumption;
4. Identification of patterns and significant events;
5. Interpretation and discussion of factors important in language learning.

Since diaries belong to the group of introspective research data collection methods they face all the problems associated with other types of qualitative data analysis. As Cohen states (2007, p. 2) interpretive and

qualitative theories can be criticized for their narrowly micro-sociological perspectives.

The most thorough work on diary studies was accomplished by Bailey. In her report *Diary Studies of Classroom Language Learning: The Doubting Game and the Believing Game* (1991) she discusses diary studies, research on second language learning and teaching that uses student journals about the learning experience. Furthermore, she defines the method, reviews a number of such studies, and examines the advantages and disadvantages of this approach. She notes that diary studies are first-person case study research, a form of empirical (data-based) research enhanced by introspection and analysis. She considers introspection to be concurrent with the learning event, immediate retrospection, or delayed retrospection. Diary studies span this continuum. Problems associated with the method mentioned by her include: sampling limitations (small samples, biased subjects); data collection issues (those inherent in self-reporting, bias in retrospection, limitations of introspection, quality and breadth of entries, and commitment of the diarist); and data analysis concerns (limited generalizability of small quantities of information, inappropriateness of causal statements, and all the problems typically associated with qualitative analysis). She identifies the benefits the method is seen to have for: teachers, in re-examining the language learning process; learners, for whom diaries are a safety control device for frustration, promote awareness of learning processes and pitfalls, and are evidence of progress; and language learning research, by adding to the knowledge base and also revealing new issues and factors to be considered.

In her analysis of diary studies Bailey plays the so called “doubting and believing game” where the doubting game underlines the logic of the experimental research, emphasizes objectivity, and takes a critical attitude towards conclusions drawn from the diary studies data, whereas, the believing game seeks truth by affirmation and accepts the experience of the person writing the diary and includes the subject (learner/teacher) as a legitimate focus of the investigation.

The most frequent threat mentioned in connection with diary studies is the aspect of external validity (generalizability), whether the conclusions based on the findings from a study of a single subject can be applied beyond the context of the original investigation. Another critical point relates to the status of data, and the interpretations derived from them. It means to what extent the diary entries reflect what was really going on at the time the

recordings were made. Bailey (1991, p. 78-83) divides her concerns about the diary studies into three categories (1) problems regarding the subjects – small number of subjects involved, (2) problems in data collection – subjective data, based entirely on subjects` perceptions of their experiences, and (3) problems in data analysis – data reduction through summarizing, coding, the open-ended nature of the data and reliability in coding and interpreting.

However, Nuan (2008, p. 123) sees no other way how the sort of data which is obtained by diaries and journals could be collected. He considers diaries to have a great deal of potential for the investigation of learning strategies and learning preferences of second language (foreign language) students. The learners` introspection permits the reader (researcher) to understand some aspects of language learning which are normally hidden from view. According to Bailey (1991 p. 82) the diary studies have potential usefulness as hypothesis-generating tools. It means that she sees their purpose in suggesting testable hypotheses which can be utilized in experimental paradigms. Learners` journals and the resulting diary studies can offer researchers many new ideas and questions about second language learning. Irrespective of this, the main benefit of diary studies for the researcher is to understand language learning phenomena and related variables from the learner`s point of view, a view from “inside the black box” (Long 1980, in Bailey 1991, p. 86). They allow the researchers to study single learners in depth. Furthermore, diary studies allow the researchers to see factors identified by learners which they may not consider to be variables worth studying. This is in fact possible due to the lack of researcher control over variables, which is seen as a problem in experimental science, but is seen as strength of the naturalistic inquiry. Another advantage of diary studies is that they reflect the real world conditions under which the data was collected. The process of keeping a diary is low-tech, portable and trainable as well. Besides, it does not require extensive preparation in test development, questionnaire design, or statistical procedures. Diaries provide valuable sources of data triangulation when used with other sources.

Types of diaries

The Diary Studies Guide (2011) summarises the ways in which participants can be asked to capture diary entries.

- *Paper diaries* are the most traditional type of diary recording method and are considered the most natural and personal. They are good

because they can be used by participants with all levels of technical ability, they can be used at the same time as digital devices, e.g. while browsing the internet, and they're very portable and can be used to capture events as soon as they happen. The disadvantages are that the researcher must wait until the diary is returned from the participant before starting analysis. Another pitfall is that rich experiences cannot be captured in the same way that audio or video can. In addition, handwritten notes are not always easy to read and transcribing can be time-consuming.

- *Electronic diaries*, such as an internet diary, provide a means whereby the user can log-on to the diary, complete the entry and then submit it to the evaluator when finished.
- In *email diaries* participants can be asked to email all diary entries to the researcher (usually at the end of each day) in a similar manner to a blog. This is useful as the researcher can view the diaries each day, rather than having to wait until the end of the process. This reduces the need for the user to carry a hard-copy diary. The disadvantages are that the most important aspect of the diary method, the recording of an event as soon as possible after it has occurred, may be missing. Since the participants may not remember the exact details of what happened, what they thought and how they felt at the time.
- Recently, it has become possible for users to record *audio diaries* (in a similar fashion to the think-aloud method) and upload these direct to a file sharing site to be accessed by the evaluator. This reduces the need for the subject to write everything down, but it does limit the scope of the diary. There is also the requirement for additional equipment.
- Using a *twitter feed* is a much newer method which allows participants to send a text message or tweet online and make entries on a private twitter account. Also, the researcher can view the diary entries as they occur and can adapt the focus of the study as it goes as an insight into the results can be seen straight away. Short entries can be focussed and to the point, and a user may be more inclined to write them more often. However, the 140 character limit may reduce the amount of information captured. Twitter feeds also allow the researcher to reply to participants if they require advice, but interacting too much with them may alter their thoughts and actions.

Being flexible and allowing participants to use *different diary capture methods* (a mixture of paper and electronic diaries) is better for the participants. However, having to analyse different types of diaries can complicate the analysis process. *The Diary Studies Guide* (2011) suggests following types of diary studies with respect to the format of diaries.

- Diaries may be *open format (unstructured)* allowing respondents to record activities and events in their own words eliciting general themes. The advantage is that the diary is much simpler to construct and allows for a greater coding of responses and thus the potential to capture a wider range of opinions. However, it is much more labour intensive in terms of the collection and analysis of the data.
- In a diary type with a *closed format (structured)* more specific questions are asked and all activities are pre-categorised. A closed format allows for more consistent data collection and simpler data analysis, but the information obtained from closed format diaries is often less rich.
- Two more diary study types exist, the so called *usability test* where participants complete specific tasks and *report on results* and problem report where participants identify problems experienced.

It has been already mentioned that diaries can be used either for research or for teacher education. According to this, Lee (2008) distinguishes among four kinds of journals which are commonly used both in teacher preparation and for research purposes: dialogue journals, response journals, teaching journals, and collaborative/interactive group journals.

- *Dialogue journals* involve teachers and students writing and exchanging their writing in mutual response, and are found to carry benefits like promoting autonomous learning, enhancing confidence, and helping students connect course content and teaching (Porter, Goldstein, Leatherman, Conrad, 1990). Dialogue journals, which involve teachers and students writing and exchanging their writing in mutual response, are often cited as a powerful tool for promoting reflection in teacher education.
- *Response journals* involve students in recording "*their personal reactions to, questions about, and reflections on what they read, write, observe, listen to, discuss, do, and think*" (Parsons, 1994, p. 12). They involve written reactions based on course content.

- *Teaching journals* serve a similar purpose but they are written reflections based on teaching experiences that teacher candidates keep during the practicum (Richards, Lockhart, 1996).
- *Collaborative/Interactive group journals* involve students in writing and exchanging journals (Cole et al., 1998). Usual collaborative methods of deepening reflection are group work and group activities. The groups or pairs work together over a period, learning how best to help each other by prompting and asking questions. The collaborative groups process a single journal that they pass from person to person, each writing about teaching issues, problems, and concerns, as well as responding to each other's questions.

Lee (2008) states that compared with dialogue journals, response and teaching journals put a greater responsibility on the teacher candidates themselves in the reflective process. They engage in a self-dialogue that results in the promotion of self-understanding and reflectivity. Collaborative/Interactive group journals, on the other hand, focus on group dynamics and synergy created by the teacher candidates, requiring them to take responsibility for learning by sharing ideas and developing insights among themselves.

How to conduct a diary study

When conducting a diary study, ethics of the diary research should be respected. A diary study packet which outlines what is required of participants overall and what they need to do each day should be provided. It contains an introductory letter, specific instructions and information about diary form. The introductory letter consists of information about the study goal and motivation, general requirements for participants, permission/consent letter and a thank you note for their effort.

Which type of diary analysis technique to use is dependent on a number of factors: 1) the type of evaluation being conducted; 2) the amount of time and resources available for the evaluation; and 3) the level of maturity of the diary. Irrespective of this, there are a number of principles that apply to all diary analyses. Corti (1993) suggested the following guidelines when conducting a diary study:

- Where a paper booklet is used to collect data, an A4 booklet of about 5 to 20 pages is desirable, depending on the nature of the diary.
- The diary should be accompanied by a clear set of instructions on how to complete the diary. The instructions should stress the importance of recording events as soon as possible after they occur and how the respondent should try not to let the diary keeping influence their behaviour.
- A model example of a correctly completed diary should feature at the beginning of the diary.
- Depending on how long the period the diary will cover, each page should clearly denote the time period it covers, with prominent headings and enough space to enter all the desired information.
- Checklists of the items, events or behaviour to help jog the diary keeper's memory should be available somewhere prominent. Very long lists should be avoided since they may be off-putting and confusing to respondents.
- If the diary is a "fixed time block" format, an exhaustive list of all possible relevant activities should be listed together with the appropriate codes. Where more than one type of activity is to be entered, that is, primary and secondary (or background) activities, guidance should be given on how to deal with "competing" or multiple activities.
- There should be an explanation of what is meant by the unit of observation, such as a "session", an "event" or a "fixed time block". Where respondents are given more freedom in naming their activities and the activities are to be coded later, it is important to give strict guidelines on what type of behaviour to include, what definitely to exclude and the level of detail required.
- Appropriate terminology or lists of activities should be designed to meet the needs of the sample under study, and if necessary, different versions of the diary should be used for different groups.
- Following the diary pages it is useful to include a simple set of questions for the respondent to complete, asking, whether the diary keeping period was atypical in any way compared to usual daily life. It is also good practice to include a section at the end asking for the respondents' own comments and clarifications of any peculiarities relating to their entries.

The data analysis may be done by the diarist himself/herself or by an independent researcher using the learner's diary. Nuan (2008, p. 120-121) emphasizes that it is a good idea to avoid analysing and interpreting the data until a substantial amount of material has been collected. The reason for this is that the researcher can avoid premature conclusions which may be inaccurate or incorrect. It is important to note that in the early stages the entries do not make a great deal of sense, and patterns emerge only in the longer term. Therefore the period of time can either be set or the researcher can monitor the collected data until they have what they need. Speaking about the number of participants in a diary study more participants than needed should be recruited. A rule of thumb is to recruit about a third more participants than needed to get good data from.

Diary studies in language learning and research context

Diaries can be used in research in various disciplinary contexts and in much broader fields, but our focus is on languages and particularly English. Examples of different kinds of diary studies retrieved from respected journals on language and educational research are presented and analyzed in this part of the paper. The main objective is to review language learning diary studies conducted in 2000-2011 and their outcomes in terms of their contribution to the development of language pedagogy research. The diary studies were collected from the following specialized and worldwide assessable journals on theory and practice of Teaching English as a foreign language: *The Asian EFL Journal*, *ELT Journal*, *TESOL Quarterly*, *Teacher Education Quarterly*, *Reading in a Foreign Language*, *System*, *ReCALL Journal*, *Assessment & Evaluation in Higher Education*, *Language Learning*, *The RELC Journal*, *Innovative Higher Education*, *Applied Language Learning*, *Education Journal* and *Volume of Selected Papers of The 4th annual CamTESOL Conference*.

The Asian EFL Journal (ISSN 1738-1460) is an academic Second Language Acquisition Research Journal. It is published monthly and presents information, theories, research, methods and materials related to language acquisition and language learning. The Asian EFL Journal is one of the world's leading refereed and indexed journals for second language research. It examines issues within the Asian EFL linguistic scene, and considers how traditional educational approaches are integrated with or contrasted against what is arguably a very specialized and relatively new field of study. This journal is now accessible to the global academic and teaching community,

where articles relating to Asian EFL may be published and viewed by all EFL professionals. The primary function of the Asian EFL Journal is to provide a freely accessible alternative journal on a quarterly basis through the user friendly and highly accessible medium of the internet that widens the target audience and authorship, particularly in the Asian-Pacific region. The AEJ also provides new insights into key issues and subjects that are emerging and are of contemporary interest that may not get published in a variety of hard copy and more 'established' publications. The Asian EFL journal sets out to more critically examine current and new methods in pursuit of helping to revitalize Asian EFL education, considered by some modern linguistic commentators as rather moribund and in need of new thinking.

ELT Journal (ISSN 1477-4526 online) is a quarterly publication for those involved in the field of teaching English as a second or foreign language. The journal links the everyday concerns of practitioners with insights gained from related academic disciplines such as applied linguistics, education, psychology, and sociology. The journal has been published since October 1946.

TESOL Quarterly (1545-7249 online) is a professional refereed journal and was first published in 1967. It fosters inquiry into English language teaching and learning by providing a forum for TESOL professionals to share their research findings and explore ideas and relationships in the field. The journal encourages the submission of previously unpublished articles on topics of significance to individuals concerned with English language teaching and learning and standard English as a second dialect. As a publication that represents a variety of cross-disciplinary interests, both theoretical and practical, the TESOL Quarterly invites manuscripts on a wide range of topics, especially in the areas of psychology and sociology of language learning and teaching, issues in research and research methodology, testing and evaluation, professional preparation, curriculum design and development, instructional methods, materials, and techniques, language planning and professional standards.

Teacher Education Quarterly (ISSN 0737-5328) is a quarterly journal of the California Council on Teacher Education. It features research and analysis related to all aspects of teacher education. The journal is indexed in the Education Index. It is a peer-reviewed journal dedicated to advancing knowledge and research on the work of teacher education researchers and practitioners. The articles link to practices, with an eye toward improving pre-

service and in-service teacher education. Preference is given to well-designed research studies that seek to advance knowledge in the field.

The online journal *Reading in a Foreign Language* (ISSN 1539-0578) is a scholarly international fully-refereed journal originally founded as a print journal in 1983 at the University of Aston, Birmingham, England. The journal moved to the University of Hawai'i in 2002. It has established itself as a source for the latest developments in the field, both theoretical and pedagogic, including improving standards for foreign language reading. This journal is published twice a year, in April and October. The editors seek manuscripts concerning both the practice and theory of learning to read and the teaching of reading in any foreign or second language. Reviews of scholarly books and teaching materials, conference reports, and discussions are also solicited. The language of the journal is English, but lexical citations of languages other than English are acceptable. Additionally, the journal encourages research submissions about reading in languages other than English.

System, an International Journal of Educational Technology and Applied Linguistics (ISSN 0346-251X), is devoted to the applications of educational technology and applied linguistics to problems of foreign language teaching and learning. Attention is paid to all languages and to problems associated with the study and teaching of English as a second or foreign language. System prefers its contributors to provide articles which have a sound theoretical base with a visible practical application which can be generalized. It is published 4 times a year.

ReCALL Journal (ISSN 0958-3440) is a fully-refereed journal published by Cambridge University Press. It is issued three times a year in January, May and September and is also available online to subscribers. The journal contains articles relating to theoretical debate on language learning strategies and their influence on practical courseware design and integration, as well as regular software reviews.

Assessment & Evaluation in Higher Education (ISSN 1469-297X online) is since 1981 an established international peer-reviewed journal which publishes papers and reports on all aspects of assessment and evaluation within higher education. Its purpose is to advance the understanding of assessment and evaluation practices and processes, particularly the contribution that these make to student learning and to course, staff and institutional development. It welcomes research-based, reflective or

theoretical studies which help to illuminate the practice of assessment and evaluation in higher education. The journal is aimed at all higher education practitioners, irrespective of discipline. It sets out to provide readily accessible, up-to-date information about significant developments within the field, with a view to the sharing and extension of evaluated, innovative practice and the development of ideas. Suggestions for special issues are welcomed. The journal was formerly known as *Assessment in Higher Education* (1975 - 1980). Its publication frequency is 8 issues per year.

Language Learning (ISSN 1467-9922) is a quarterly scientific journal dedicated to the understanding of language learning broadly defined. It publishes research articles that systematically apply methods of inquiry from disciplines including psychology, linguistics, cognitive science, educational inquiry, neuroscience, ethnography, sociolinguistics, sociology, and anthropology. It is concerned with fundamental theoretical issues in language learning such as child, second, and foreign language acquisition, language education, bilingualism, literacy, language representation in mind and brain, culture, cognition, pragmatics, and intergroup relations. The journal was established in 1948.

The *RELC Journal* (ISSN 1745-526X online) is a fully peer-reviewed international journal that publishes original research and review articles on language education. The aim of this Journal is to present information and ideas on theories, research, methods and materials related to language learning and teaching. Within this framework the journal welcomes contributions in such areas of current enquiry as first and second language learning and teaching, language and culture, discourse analysis, language planning, language testing, multilingual education, stylistics, translation and information technology. The journal was first published in 1970.

Innovative Higher Education (ISSN 1573-1758 electronic version) presents fresh ideas in higher education in a straightforward and readable fashion. The journal features descriptions and evaluations of current innovations with relevance for action beyond the immediate context in higher education. It also focuses on the effect of such innovations on teaching and students. The journal publishes diverse forms of scholarship and research methods by maintaining flexibility in the selection of topics considered appropriate for the journal. It strikes a balance between practice and theory by presenting articles in a scholarly manner to both faculty and administrators in the academic community. The journal deals with subjects

such as education, higher education, educational technology, learning and instruction and teacher education. The journal is published five times a year. Its first issue was published in 1976.

The Professional Bulletin *Applied Language Learning* (ISSN 1041-6791 online) provides a forum for the exchange of ideas and information on instructional methods and techniques, curriculum and materials development, assessment of needs within the profession, testing and evaluation. Furthermore, it focuses on the implications and applications of research from related fields such as linguistics, education, communications, psychology, and the social sciences.

Education Journal is a publication of the Hong Kong Institute of Educational Research The Chinese University of Hong Kong formerly known as "Studium". It was founded in 1968 and is published twice a year.

The *2008 Volume of Selected Papers* is the outcome of the 4th annual CamTESOL Conference on English Language Teaching held at the National Institute of Education in Phnom Penh, Cambodia, on February 23-24, 2008. It includes 16 papers that deal with a range of diverse topics presented at the conference attended by over 1000 delegates from 24 countries. The CamTESOL Conference series provides an important opportunity each year for academic dialogue that serves to strengthen the field of English Language Teaching (ELT) in Cambodia, the region, and globally, to showcase successes, learned lessons, and address some of the challenges shared by English language teachers in Cambodia and throughout the world.

The examples of diary studies in Language Pedagogy

The 16 diary studies presented in this part of the paper were selected with the aim to show a broad register of occasions in which this research tool can be applied within language learning and teaching research. The individual case studies are clustered according to the field of language learning and teaching they are concerned with. Another criterion for putting the diary studies into the given order was the attempt to illustrate which tendencies have developed in the use of diaries for the purposes of language research. The summaries are mostly rather extensive because the researchers' descriptions and discussions of the data analysis procedures and their interpretative comments about diary entries were more interesting than the quantitative analyses themselves.

Myers (2001) from Ming Chuan University Taiwan applied James' theoretical model of consciousness known as "the stream of thought" in his study "Self-evaluations of the 'stream of thought' in journal writing". The students evaluated their thought processes by following a guided questionnaire designed to elicit thought patterns based on James' concept. After having written their journals over a 3-month period, students were able to trace their strengths and weaknesses and describe their own learning patterns and needs in regard to learning how to write in English for both personal expression and academic writing. Through an analysis of their reflections, certain general patterns emerged in relation to vocabulary acquisition, organizational strategies, invention, personal expression, and thought.

The aim of the study was to find out to what extent re-reading journals helped individual students, especially weaker ones, to clarify and realize their language learning objectives. In this study, 15 Mandarin-speaking Taiwanese students were randomly selected from two second-year university composition classes for Applied English majors at Ming Chuan University in Taiwan. The classes had a total of 68 students. Their ages ranged from 19 to 25 years. Their English ability was at an intermediate level; the writing class was a required subject for their major and was intended to teach them practical and academic writing skills. The diaries were accompanied by the guided self-evaluation questionnaire. The students had the assignment of writing journals for 3 months, three times per week. The 15 random selections in this study fell into a range of 30–34 entries over the 3-month period. The assessment of the diaries was based on quantity, coherence, and interesting content rather than on grammar. They had the option of choosing from a list of 50 topics which allowed them to practise such invention skills as comparison and contrast and persuasion. They also had the option of writing about anything that they wished to write about. They exchanged journals once during the semester with a student of their choice in order to increase the communicative aspect of the activity and to expand their audience to other students as well. Two weeks prior to the final collection of their journals the students were given a set of self-evaluation questions based on James' stream of thought, which they were supposed to respond to in their journals. A month later the students were asked to find a partner and interview each other about their self-evaluations and then re-write them in

class. Thus, they had two opportunities to write their reflections about their stream of thought in their writing.

When analyzing the diaries several patterns emerged. Many of the students became especially aware of their vocabulary deficiencies and the need to strengthen their vocabulary through increased reading and writing. Journal writing also provided opportunities for the development of their own individual invention strategies, and several students saw factual knowledge as the basis to further creativity and discovery. Moreover, many students felt comfortable expressing their feelings in the non-threatening way which journal writing provided. For most students a reoccurring theme was that they recognized in their writing involved thinking itself. Many of them saw themselves as improved thinkers and saw a connection between thinking and writing.

In the diary study “The Impact of Diary Analysis on Teaching/Learning Writing” Marefat (2002) from the Allameh Tabatabaai University in Tehran, Iran, looks specifically at students' reactions to class events, materials and the instructor. It reports a personal experience to investigate the impact of diary analysis on teaching writing: detecting the problematic areas, evolving teacher assessment and particularly facilitating and thus developing students' writing abilities. 80 Farsi-speaking undergraduate students majoring in EFL served as subjects. The students were taking their writing courses with the researcher. They were to write their reactions, comments, questions and feelings for 5-10 minutes at the end of each session. The procedure continued for 13 sessions. Examination and analysis of students' diaries revealed to the researcher that it was a useful practice in identifying particular areas of difficulty and interest for the students. This led her to revise the syllabus and the materials. They all opted for simpler texts, enjoyed peer correction, wished to discuss recurring problems in class. Students reported enjoying the realistic task of having active dialogues, which indirectly led them to practice and improve writing. The use of diaries may be recommended to teachers and students to facilitate and improve teaching and learning writing.

The subjects of the study “Using Dialogue Journals as a Multi-Purpose Tool for Pre-service Teacher Preparation: How Effective Is It?” (2004) written by Lee from the Faculty of Education at the University of Hong Kong were pre-service teachers with little or no teaching experience. They wrote journals throughout the teacher education course, not just within the

teaching practicum period. The emphasis was on the interaction between the teacher educator and the student teachers through *dialogue journal* writing. Finally, this study focused not only on how journals help pre-service teachers develop reflection but also what they think of this tool of learning as well as what the teacher educator has learned from the dialogue journal writing process. All the 18 student teachers were Chinese, 14 with a degree in English or a language-related subject (such as translation) and 4 with a non-English degree. The course Subject and Curriculum Teaching for pre-service English teachers covered the following areas: first- and second- language learning theories; language teaching methodology; lesson planning and evaluation; classroom language; classroom interaction; language awareness; grammar; reading; speaking; listening; writing; vocabulary; assessment; learning styles and strategies; information technology in language teaching; and assessment. The research was carried out five hours a week for a total of 20 weeks in two semesters. In the first 10-week semester, the student teachers were asked to submit e-mail dialogue journals on a weekly basis. They were instructed to reflect on the ideas introduced in class, discuss the strengths and weaknesses of the ideas, ask questions, raise comments, make requests, or talk about any other things which they felt were relevant to their learning. At the end of the course, they were asked to complete a short anonymous evaluation questionnaire. The researcher randomly selected five of them for individual follow-up interviews. The interviews were semi-structured. The student teachers' views of dialogue journals were solicited in an extra e-mail dialogue journal at the end of the course.

The dialogue journal writing experience demonstrated that both the teacher educator and student teachers benefited considerably from the process. The investigation showed that dialogue journals can be used as a multi-purpose tool in pre-service teacher education. They can serve as a teaching tool for the teacher educator and provide a venue for developing reflection skills that are crucial to teacher development.

The same researcher explores in her article "Preparing pre-service English teachers for reflective practice" (2007) how *dialogue journals* and *response journals* can be used to encourage reflection among pre-service teachers. Thirty-one pre-service English teachers from two Hong Kong universities participated in the study. One group wrote dialogue journals and the other group wrote response journals throughout two semesters on two separate ELT methodology courses, both taught by the author. Data was

gathered from their journal entries and post-study interviews. The findings show that dialogue and response journals provided opportunities for pre-service teachers to engage in reflective thinking, and all of them found the experience of journal writing beneficial. The article concludes with a number of recommendations on how teacher educators can use journals effectively as a tool for promoting reflection in pre-service teacher preparation.

Walter-Echols (2008) from Assumption University of Bangkok, Thailand conducted her diary study "Journaling as writing practice, reflection, and personal expression" in two courses Theory and Practice of Writing and Oral Presentation. Students were asked to submit one journal entry per weekly class session. They could write by hand in a normal lined notebook, or they could word process their entry and submit it in a simple plastic folder. The students were asked to use two notebooks or two folders, so that while the teacher was reading one entry, they were writing the next one for submission the following week. In the trimester system of 12-week courses, students submitted their journal entries from the second week on, and, if they kept up the weekly rhythm, they did not have to submit their journal for the final class. If 10 journal entries were submitted, students would receive 100% credit for that component of the course. Journal quality or length was not graded or evaluated in order to motivate the students to write. The students were told they could write as much or as little as they want, as long as they write something each week. It was suggested that they reflect on the class work, the readings and any other course components and how they feel about them. The students could tell the teacher what they really think about the class as well; they could raise issues about things they do not like or do not agree with, as long as they are polite and constructive. They could also reflect on other matters of concern to them personally, even if they do not relate to the class directly. The students were told that whatever personal information they revealed would be kept confidential. The teacher put herself in the role of active listener and had to respond to what the students write. The teacher refers to the fact that because of the response factor, this most common way of journaling has long been called a dialogue journal. Her comments were reactions to what was said and she kept them positive and constructive. Sometimes she gave advice, but only if the student seemed to be asking for it.

The conclusion drawn from the study is that since the students did not have the freedom to choose when they write, it might have been that this

way emphasized the aspect of writing practice more than it encouraged true expressive writing. Reflection on content being studied was an important mode of self-study for many students, with corrective or encouraging input from the teacher built in. It was very important to the learners that they had the right to 'speak their mind', positively/negatively, about what they were learning, their co-learners, their environment and their conditions for learning, including the teacher. The teacher – researcher considers the journal to be an anti-pressure control device which may clear up misunderstandings, that otherwise might tend to become exaggerated and explode.

In his case study "Framing, reflecting on and attending to a rationale of teaching of writing in the second language classroom via journaling: A case study" Byrd (2010) from Weber State University, USA examines one pre-service teacher's initial perceptions of the teaching of writing in the second language classroom. He also investigates the changes manifested in her journal entries and which were subsequently demonstrated in her beginning and ending teaching philosophy statements. Through constant comparison methodology, the data suggest that pre-service teachers are capable of addressing and solving problems that they encounter in their coursework which will allow them to become more effective practitioners. The implications of the study suggest that pre-service second language teachers should be encouraged to move beyond simply learning information; rather they can be guided in their reflections about what is happening to inform their developing teaching skills to the benefit of their future students. The study examined a pre-service teacher, a Spanish teaching major at a U.S. university. She was in her field experience, teaching at a middle school, while enrolled in both a field experience and a seminar class, which met monthly and which the researcher co-taught with her college supervisor. Part of her regular assignments for seminar was to write a weekly reflective journal entry, discussing matters that she felt were important as she progressed towards becoming a teaching professional. These journal entries were sent, via the Internet, to her college supervisor. In order to foster the pre-service teacher's development through the semester, she was provided with a series of prompts that she used in addition to her regular journal writing. The second method of data collection was a face-to-face interaction with the subject during two personal interviews. The data were analyzed recursively and inductively. A constant comparison method to examine the documents

was used. Each journal submission was read five times marking comments related to the writing. The researcher was also guided by the prompts that he had provided and sought any other parts of entries that dealt with the teaching of writing. The first reading examined broadly the ideas that the subject wrote in her journals in regards to the research topic. The second reading allowed the researcher to code the comments for emerging themes. The final reading allowed refining the codes and identifying emerging detailed themes. Finally, a word processing programme was used to extract quotes from the diaries that were related to each category. The data formed a convenient document that allowed insight into the categories as they manifested themselves. The data interpretation traced the path of the pre-service teacher's thinking as she developed a philosophy for the teaching of writing in the second language setting.

The study is seriously limited with only one person subject and the findings here cannot be generalized to all pre-service teachers, several important ideas can be used to inform second language teacher education. Integrating guided journal writing throughout a teacher education program can be an effective means to help teacher educators guide future second language teachers to examine all modalities of language teaching in a systematic manner. Teacher candidates are often taught about the modalities in various courses in their Teaching English Practice. By providing the opportunities to reflect on various aspects of teaching these modalities, they may be able to see how to address them in their future classrooms more clearly.

In her study "Finding out about students' learning strategies by looking at their diaries: a case study" Halbach (2000) from Universidad de Alcala Madrid in Spain presented and tested a checklist to see whether it can help to improve students' use of strategies as reflected in their diaries. Some interesting differences between successful and less successful students appeared which open up questions about strategy training in general. The students were given two models as a general guideline, but at the same time were encouraged to create their own, personal format which should contain the information that was required. Most students adopted one or the other of the models suggested. In total, there were 181 students in the course. Of these, 73 handed in their diaries. Their length varied from a single to 18 A4 sheets. For the study, 12 of these diaries were selected. The selection was carried out on practical grounds. The diaries had to contain all the required

types of information, the entries had to be dated and the shorter diaries would not be taken into consideration since they did not yield enough information. The study was undertaken in a long term undergraduate English language course.

One of the important characteristics of this course was that it included a component of learner- or strategy-training. As a way of helping students develop such skills as self-assessment, self-monitoring, planning, and resourcing they were asked to keep a learner diary in which they should record all the activities that brought them into contact with the English language, and which they thought might help them improve their English. Students were told to describe only those events they thought were of interest. Also to be included in the diary were the problems students had found in their encounter with the foreign language, and what they planned to do about it. The language in which these records had to be kept was not specified, but most students opted for English.

The researcher made an effort to measure what the learners needed to know about the procedures that constituted the learning tasks to accomplish them successfully and to evaluate the frequency of spontaneous monitoring and the appropriateness and validity of the monitoring. Through it the students' ability to monitor was measured. It became apparent that the more successful students used the strategies more frequently, and thus got a higher score according to the rating scale. Also interesting in this context was the fact that the weaker students seemed to be far less critical of their own performance than the better students. Thus, students, who failed the final exam, found few problems in their activities. The researcher related her results to what Cummins (1981) found out in the context of bilingual education. According to him, there exists a threshold level of proficiency in the second language below which strategy acquisition is not possible. She states that weaker students do not have enough strategies to help them with language learning, but at the same time, they are not proficient enough to benefit from strategy training, since they cannot use these strategies in their second language. This means that they will not be able to speed up their learning with the help of their strategies. Further work is needed to find out whether a threshold level like this really exists. What became apparent was the need for strategy training in specific areas. Weaker students seem to lack a critical self-awareness (the strategies of self-monitoring and self-evaluation), while successful students have developed these together with

the abilities to take advantage of any learning situation, to use all available resources and to select appropriate follow-up activities to deal with their problems.

In the diary study “Focusing on learning styles and strategies: A diary study in an immersion setting” Carson and Longhini (2002) concentrate on the second language learning styles and strategies of the diarist/researcher in a naturalistic setting, utilizing categories from Oxford's (1990) Strategy Inventory for Language Learning and the Style Analysis Survey. The analysis of diary entries indicates that the learner's learning style remained relatively constant throughout her time in the language immersion situation, but her strategies, while consistent with her learning style, were more variable over time. The total of indirect strategies used (58%) was higher than the total of direct strategies (42%), with the most frequently used strategies being those in the metacognitive group. The diarist's learning style appeared to influence her use of learning strategies.

In her study “Listening Strategy Instruction: Exploring Taiwanese College Students’ Strategy Development” Chen (2009) from the Centre for General Education at Chinmin Institute of Technology in Taiwan reported about the implementation of strategy instruction (SI) in the regular EFL listening curriculum in the context of a Taiwanese technological college. Rather than examining a cause and effect relationship, this study focused in particular on exploring learners’ listening strategy development over the course of SI. The participants were 31 non-English major students of different listening proficiency enrolled in an EFL listening course for fourteen weeks. The SI consisted of in class strategy awareness-raising, demonstration, practicing and discussion of students’ strategy use, as well as out-of-class students’ self-reflection on their own listening processes. Reflective journals were employed to provide quantitative and qualitative insights into how students develop their strategy use over time, and how they adapted themselves to learn in more self-directed ways. Students were asked to reflect and evaluate how they had tried to comprehend the input and what they had understood right after completing their listening tasks. In order to objectively collect consistent data, participants were assigned to complete the same listening task for each of their reflective journals. These tasks were similar to the video or audio listening clips that were practiced in class sessions. Furthermore, participants were informed that the purpose of keeping reflective journals was not related to assessment, but was to help them reflect on, and evaluate,

their listening development and learning progress, in order to encourage them to report honestly and without reservations. By structuring the data collected, students' journals could be more objectively compared and analyzed. In addition, to examine the changes over longer, and potentially more meaningful, intervals (one month) during the SI, only the first, the middle and the last of each student's reflective journals, at weeks 2, 8 and 14 of the program were sampled and analyzed. The participants' reflective journals were analyzed in two ways. First, the strategies that participants reported using were quantitatively coded. Furthermore, journal entries were analyzed qualitatively to understand the nature of strategy use reported by students. Results showed that students reported greater awareness and control of their listening strategies as a result of SI and writing reflective journals. This study demonstrates that SI can be integrated in the EFL listening classroom, and can lead to positive effects for learners' understanding and use of listening strategies. Therefore, it is suggested that there needs to be a shift in conventional listening instruction where a test-oriented approach predominates. Research has indicated that the more emphasis there is on testing as the goal of listening instruction, the more prescriptive teaching and passive learning there tends to be. As a result, students have been prevented from developing effective listening strategies and from understanding and activating their listening in a second language. The paper concludes with implications for implementing SI in regular EFL listening curricula within the constraints imposed by the given context.

The study written by Krishnan and Hoon (2002) from Nanyang Technological University in Singapore "Diaries Listening to „voices from the multicultural classroom" focuses on the teacher and course developer as two parties who would benefit from reading the entries in improving the teaching and learning environment in an intensive English learning course for foreign learners. The learners were first year students who attended a pre-semester intensive English course for seven days. Mainly Indonesians and Malaysians, they were new to Singapore and its culture. Each learner was given a notebook to record his/her thoughts and feelings on a daily basis. They were told that the diaries are not going to be assessed, and that the activity itself was a part of a study on language learning. In the notebook, information guidelines were provided including information about what a journal is, why it should be kept, what should be written in it. Thirty-eight diaries were collected on the last day of the course. Only entries that reflected the request

for a record of thoughts and feelings were selected. Then the entries were grouped according to the issues that repeatedly appeared.

The important issues identified were grouped as: Move anxiety – learner’s ability/disability to fit into a new environment, Learner agenda - learner’s perception of what he/she wants to learn, and Learning environment – an issue that includes the teacher, other learners and activities, and materials. After analyzing the identified groups of the students’ most significant issues the usefulness of the entries was summarized and the researcher made a recommendation of what could be done by the course teacher/developer to deal with the concerns, problems and initial perceptions and beliefs of the students in a multicultural classroom.

Gebhard (2005) from Indiana University of Pennsylvania and Toshinobu Nagamine from Yatsushiro National College of Technology, Japan are co-writers of the article “A Mutual Learning Experience: Collaborative Journaling between A Non-native-Speaker Intern and Native-Speaker Cooperating-Teacher”. In this diary study the context of a journaling experience of a non-native speaker (NNS) and a native-speaker cooperating teacher (NS) and a process of keeping the *collaborative journal* is described. The intern (NNS) and the assigned course instructor (NS) each undertook an individual analysis of the journal content in relation to issues they raised. In conclusion, they offered opinions about the value of keeping the collaborative journal from their individual perspectives on the basis of the qualitative analysis of the journal entries. Their journaling experience depicts a collaborative journal as dynamic and constructive. According to both of the researchers the exchange of ideas and thoughts about issues and problems related to learning and teaching enables them to work together to improve their teaching practices in a cooperative manner.

On the basis of their journaling experience, the writers recommend that other teachers and student-teachers starting the same type of journaling project negotiate goals and expectations, the form and the content of the journal and the frequency of journaling before they start. They state that this negotiation process is crucial to avoid or solve unforeseen problems in the process of collaborative work. They believe that the negotiation process plays an important role in constructively transforming a private act of writing to a social, collaborative act of writing for mutual professional growth.

The subject of the case study “Extensive Reading and Language Learning: A Diary Study of a Beginning Learner of Japanese” written by Leung (2002)

from University of Hawai'i at Manoa is the researcher and the author of the paper who lived in Hong Kong for 20 years where she learned Chinese as her first language and English as a second language. She has resided in and studied English in the US and Canada since 1992. At the time of the study, she was attending the University of Hawai'i for her master degree in ESL. The study was divided into two stages, covering 9 and 11 weeks. During the first stage of the study, the researcher was taking a graduate course about teaching ESL reading. It was then she gained a better understanding about what extensive reading was and how it could benefit language learners. She spent an average of one hour studying and reading Japanese each day. Every day after her study, she reflected on what she learned that day and wrote in her journal issues that concerned her. Then she gathered her notes and made one to two diary entries recording her experience and progress for the week. The diary was written in English, which is the language she had been using to write her personal journal for more than 8 years. Periodically, she talked to her professor about her progress and concerns about her learning Japanese through e-mail or after-class discussions. After 9 weeks of studying and recording, the author reviewed her journal and identified interesting trends. Then, she resumed her study after two and a half months. During the second stage, she continued to follow the same study pattern and journal recording procedure that she did in stage 1. In the second stage, she found a Japanese friend who was willing to help her with her study for about half an hour to 1 hour each week. In order to triangulate the subjective data from journal entries and provide a more objective view, other sources of data were used to evaluate the progress in her learning as part of the study during the second stage. First, the tutoring sessions were tape-recorded. They contained discussions of various reading passages from a first-grade Japanese textbook, the author's questions about Japanese, her tutor's comments, and oral reading. The most important trends were identified and transcribed. A second source of evaluation was a vocabulary test. The vocabulary test was created by a Japanese graduate student who randomly selected a sub-sample of 150 words from a word list of 689 words in *Japanese for Busy People*. These 689 words were considered to be essential for the most common situations in which non-native speakers need to communicate in Japanese. Then, 50 words were randomly selected for the first test (version A) and 50 words for the second test (version B). The answers were marked by the test

constructor and scored by the researcher. In grading the tests, each item was evaluated on a 0-4 scale.

The author states that through this study, it can be seen that the key element in the success of extensive reading is having access to a large quantity of reading materials geared to an individual's level of proficiency and interest. The author states that while some people believe that there cannot be any pleasure in reading if learners haven't mastered the language, she would agree with those who argue that postponing reading until students have at least reached a certain level of proficiency may ignore the role that reading can play an important role in foreign language acquisition, particularly in the learning of new words. She concluded if appropriate reading materials are available, it is possible that a beginning foreign language learner can obtain the benefits that extensive reading can offer. However, it should be mentioned that although the instructions the author received from her textbooks through self-study and her tutor contributed to the improvement of her vocabulary knowledge and reading comprehension, reading extensively also played an important role in her learning process.

Ewald (2006) from Saint Joseph's University in Philadelphia, USA does not aim in her study "Student's evaluation of Dialogue Journals Perspectives on Classroom Themes" to measure journals' effect on second language acquisition. Her target is rather to capture and interpret learners' own perspectives of the role of *dialogue journals* in their second language classes. The motivation of the study was to discover learners' perceptions of the use of the first language in the second language classroom. The study is a part of a larger investigation of dialogue journals that were written between a second language teacher and her students in first semester Spanish language course. The journals were collected over a period of two-and-a-half years, subsequently, the journals were coded and then analyzed within a qualitative framework. The participants included 129 students. Learners represented sample groups from two large universities that both required one to two years of college level, foreign language instruction. All students shared English as their first language. The language learners' Spanish background ranged from no previous language study to one to two years of high school level instruction. The journals were a required part of seven class sections (each comprised of 18 to 21 students.) Learners received credits for completing the journals and evaluation was not based on content or grammar. There were a total of five journals assigned over the semester, but

learners were encouraged to write additional journals if they wanted. The suggested topics were related to issues that learners confront in a first year second language classroom, however they were given the freedom to write on any course-related theme. Learners were encouraged to use journals to react to a classroom activity, analyze a language learning issue, suggest classroom events, evaluate a particular exercise, and reflect on personal language learning experiences and development. Learners' dialogue journals, including instructor comments were numbered 1-5 representing the journal number assignment, and labelled A-G, according to their respective class sections. Journal number 5 invited learners to evaluate the journals themselves. Both qualitative and quantitative frameworks of analysis were employed; the quantitative analysis was limited to the use of raw numbers and percentages.

The conclusions of this study aim for transferability rather than generalizability. According to the author the results of this diary study reveal that researchers must choose and employ various frameworks of analysis with great care. A quantitative analysis is often an appropriate measure of overall reaction, but it risks hiding those qualitative elements of the data which reveal the most interesting findings. For example, describing the frequency of a particular dialogue journal comment disguises important qualities of the comment itself. It means a discrete number hides the strength of a comment. Another finding was that an overall frequency of occurrence hides the number of times that an individual learner makes the same type of comment. The last conclusion which has been drawn from the study states that some learners expressed a particular reaction, positive, negative, or neutral, but then qualified it with reasons and situations in which a different reaction could have also been relevant. So a learner's perspective registered as a negative reaction can have a more complex position than a mere number suggests.

Moon (2003) suggested it might be interesting to find out how the use of different media might affect the process of writing diaries and the learning that results. There is currently little research that aims to compare how different types of diaries are used and for what specific learning and teaching purposes. With this idea in mind Gleaves, Walker and Grey (2007) published a study called "Using digital and paper diaries for learning and assessment purposes in higher education: a comparative study of feasibility and reliability". The study was carried out to investigate *digital diary* use within a

group of undergraduates, to some of whom the authors allocated Personal Digital Assistants (PDAs), which they used to contribute to a blog (digital diaries), and to some of whom *hard-backed format (paper diaries)* were given.

The findings indicated that whilst students found both forms of diary acceptable and convenient, differences emerged in the way that the diaries were being used on a day-to-day basis, both in the frequency of entry and in the length of entries made. Throughout the study, the digital diaries were used more frequently, although the entries were often brief and incomplete. Conversely, students completing the paper diaries made significantly fewer entries in total, but those that were made were longer and more discursive in nature. Furthermore, it was found that the paper diaries possessed positive qualities related to handling and attractiveness that promoted more prolonged use, whilst the negative qualities of the digital diaries were linked to technical limitations. The implications of this work are considered in relation to more general notions of using dynamic devices to encourage students to engage in reflexive criticism.

The motivation of the study "A diary study of difficulties and constraints in EFL learning" (2005) by Jing from University of Hong Kong was to help learners come to terms with difficulties and constraints in EFL learning in order to involve them in more active and autonomous learning. The learners should first become aware of their own attitudes towards EFL learning processes and problems. The diary entries used in the study were collected from a metacognition training (MT) project conducted for BA TEFL undergraduates at a local teachers' College in China. The MT project was incorporated into a regular one-semester/18-week EFL reading curriculum for the second-year English majors in three classes (38 students each). The objective of the integrated MT was to enhance metacognitive awareness in EFL reading and to foster learner autonomy. The author taught the Extensive Reading course for these three classes and conducted the MT project. At the same time, the students were taking an Intensive Reading course, not taught by the researcher. Each class had a different teacher for the Intensive Reading course, one of whom was a North American native speaker of English. As part of the Extensive Reading course requirements, students were asked to write reading reports and to keep a learning journal, recording their conceptualization of EFL reading processes and their reflections on other aspects of EFL learning (e.g., listening, speaking, writing, grammar and

vocabulary learning). The original data set totalled 352 entries in English by 72 diarists in three classes who were willing to submit their work for the classroom research. 28 of the longer and more substantial entries were selected from each class set of journals for more detailed analysis. Following this procedure, 84 entries by 57 students were analyzed. To interpret the diary data, content analysis was conducted by counting explicit mentions of difficulties and constraints learners perceived that they encountered and then grouping the mentioned themes into categories. To enhance data interpretation, insights from classroom observation and informal interviews were also drawn on. All the explicitly mentioned difficulties and constraints in the diary sample were presented in terms of their frequency/distribution. For strategies adopted and perceptions of learning processes only the important themes were detailed in terms of their frequency/ distribution. A wide range of minority themes was grouped as a broad category of “miscellaneous mentions”.

The researcher found that students were more willing to write about their learning difficulties and their immediate concerns and their attitudes towards the classroom behaviours of teachers. The study found out that students` responses to linguistic difficulties were characterized by mostly quantitative approaches to language learning. The examples of quantitative conceptions were: efforts to accumulate knowledge and to upgrade language skills through as much practice as possible, recitation and memorization in vocabulary learning, and close attention to precision and details as well as a tendency to study for examinations. The researcher`s conclusion was that in the diary study, the learners` option for quantitative approaches to learning was largely due to the examination demands, as well as other socio-psychological constraints which diarists perceived. Among them were listed the following: undesirable teacher–learner role relationships, negative self-evaluation/self-esteem, test anxiety, deficient study skills and learning strategies, and obstacles to independent learning. Although according to the researcher these non-linguistic restrictions were not frequently mentioned (as many of them were sensitive issues), he argued that socio-psychological factors substantially affected learning.

In his paper “Learning diaries to Foster learner autonomy in mixed-ability groups” Alonso from Universidad de La Rioja, Spain (2011) described the role of learning diaries to promote self-reflection and learner autonomy in EFL with mixed-ability 4th year ESO students. It refers to the research

carried out with mixed-ability 4th year ESO students at a secondary school in Oviedo (Asturias) focusing on the main characteristics of the students involved in the study, and the tasks developed. The participants involved in the study were 92 students from 4th year of obligatory education at a secondary school in Oviedo (Northern Spain). Fifteen of these students had specific learning difficulties and/or suffered lack of motivation towards formal foreign language learning. The rest of the informants were also in their last year of obligatory education and did not have any specific learning or behavioural problems. The research was carried out during two academic years (2003-2004 and 2004-2005) and the participants were divided into four groups according to the school year during which they took part in the study, and their learning capacities. Thus, students who participated during the school year 2003-2004 were included in group 1 if they belonged to the learning difficulties group and in group 2 if they belonged to the ordinary school classroom, while students with learning problems from the school year 2004-2005 made up group 3. Group 4 was formed by students without learning difficulties analysed during the same period of time. All the participants were involved in an *e-mail tandem exchange*, which is based on two main principles: reciprocity and autonomy.

In their diaries students should keep a copy of the e-mails sent by the tandem partner as well as their reflections on them regarding unknown vocabulary, comments and corrections made by the partner on the e-mail they have previously sent, and any other comments students considered relevant for their learning. Diaries could be written in Spanish or English and students were given some time to write their entries at the end of each session in the IT room. At the beginning of the school year, students were given examples of previous work on tandem paying close attention on how to correct partners' mistakes, and to reflect on their learning process. At the end of each term, the students showed their diaries to the teacher, discussing the main difficulties they have found while writing them. No extra mark was given for this work. At the same time, students with learning difficulties (groups 1 and 3) filled in a learning agreement at the beginning of both academic years where, on the one hand they were informed about the topics they would be working with their tandem partners and, on the other hand, they were asked to choose what they would like to learn from each of the topics. They were supposed to give reasons for their choice as well as the tools they would be using in order to attain their goals. The aim of this

learning agreement was to make them feel responsible for their learning, which is why they had to sign it at the end.

During the school year 2004-2005 forty-one out of sixty-three students without learning difficulties were asked to reflect on their learning by means of a diary. However, fifteen of them refused to do it as it was not a compulsory task in order to pass the subject. In order to establish a comparison with the rest of the members of this group and those students from group 2, students without learning difficulties who were analysed in the school year 2003-2004 and did not write a diary. All the participants had to fill in an evaluation sheet at the end of each school year where they had to give their personal view on the e-mail link, and an evaluation of their tandem experience by giving a mark from 1 to 5, justifying the reason for that choice. The author indicates that the use of learning diaries helped the students to be more reflective. Students who wrote learning diaries performed better in their evaluation of the process and they also felt more autonomous, and they allowed students with learning difficulties to reflect on their learning process.

To sum up reflective diaries are often used with the aim to foster reflection as a habit, especially among pre-service teachers early in the teacher preparation process and facilitate reflective thinking in the classroom both as an intern and as a practicing teacher. The plentiful diary studies about teaching writing suggest that journal writing contributes to academic writing and can be used for research. Data collection is directed toward future essay writing in which students refine essays around topics that interest them and which they have already explored in their journals. Collaborative diaries seem to offer an insight into the interactive experience between teachers and their discussion of problems and benefits of language teaching. A dialogue journal between teacher and learners can be used to create a forum in which meaningful dialogue can be achieved. The researchers utilize diary studies to assess how students make use of their opportunities to practice and learn English, and what they considered important for their learning in terms of learning styles, strategies and strategy instruction. In relation to the development of metacognitive learning strategies a diary study was applied to involve learners in more active and autonomous learning. Diary studies have found their justification as a survey into the problems of multi-cultural classes as well. Diary entries of learners from a multi-cultural background can help teachers and course developers improve the teaching/learning environment. The implementation of ICT into

language teaching and learning calls for research in the field of comparing and assessing the usability of paper and digital diary formats. A collaborative diary in an e-mail format was a useful and helpful tool when it came to giving reasons in support of learners' views when they had to evaluate their partner's work in their e-mail tandem experience. The incorporation of diaries and journals as learning, assessment and research vehicles into programmes of study within higher education has enabled the further growth of reflection, creative writing, critical thinking and metacognitive processes of students' learning.

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Abstract

The paper deals with diary studies as an introspective technique in researching the foreign language learning and also analyses published studies, which use diaries, journals and logs in their research. The first half of the paper puts the diary studies into a broader research context and defines them as a form of empirical (data-based) research tool, enhanced by introspection, in the tradition of naturalistic inquiry. Furthermore, it mentions the advantages and pitfalls of using diary studies for research purposes and summarises different kinds and formats of journals. The paper also focuses on the principles of conducting a diary study. The second part of the paper deals with the analysis of particular diary studies. It reviews language learning diary studies conducted in 2000-2011 and their outcomes in terms of their contribution to the development of language pedagogy research. The diary studies were collected from the following specialized and worldwide assessible journals on theory and practice of Teaching English as a foreign language: The Asian EFL Journal, ELT Journal, TESOL Quarterly, Teacher Education Quarterly, Reading in a Foreign Language, System, ReCALL Journal, Assessment & Evaluation in Higher Education, Language Learning, The RELC Journal, Innovative Higher Education, Applied Language Learning, Education Journal and Volume of Selected Papers of The 4th annual CamTESOL Conference.

Keywords

diary studies in language learning, introspective and retrospective research methods, types of diaries

Extent: 88 082 characters

THE MEASUREMENT OF TEXT DIFFICULTY AND DIDACTIC EFFECTIVENESS OF DIDACTIC TEXTS

Karina Turčinová

Introduction

Measuring effectiveness in general is probably one of the hardest tasks that researchers can set themselves. Two different people will never understand effectiveness in the same way and therefore we will probably never meet all the requirements that have to be proved by one single method.

There are many points of view to choose from and many methods that help to evaluate didactic texts and we will present and describe in depth especially those methods that deal with measuring the text difficulty and didactic effectiveness of didactic texts.

This study consists of four parts. The first part deals with the description of didactic texts and their typology. The second discusses the characterization of textbooks and their structure. The third section provides a description of the current situation of textbook research. The final section provides the core of our study – parameters of textbooks – where we present what parameters and types of measurements of textbooks are being used and define methods used for measuring their effectiveness. In this chapter we also provide examples of the usage of these methods.

Didactic texts

To define the notion of a didactic text we need to determine the word text itself. The word **text** originates from the Latin word *texte*, *textere* and it means weaved material. The text according to Miháľechová (2008, p. 9):

- denotes;
- predicates;
- clarifies;
- was created by someone;
- was created for some reason;
- was created for someone.

The idea of a text is that it can be made up of any set of symbols that carry a message. A **didactic text**, as we can presume, therefore means that it is a kind of a coherent and complex text: a set of symbols that carry didactic information. Didactic texts, as units of verbal or non-verbal image information, have particular didactic functions. These functions support the carriage of didactic information and subsequently the text functions as a didactic communication (Průcha, 1987, p. 8). Didactic texts have three distinctive **features** (Gavora, 1992, p. 11):

- communication;
- cohesion and
- coherence.

The **typology of didactic texts** is defined very similarly among the authors dealing with didactics. According to the typology of didactic texts for foreign language teaching outlined by Průcha (2002, p. 277) the didactic texts may be classified in the following way:

- *“Textbooks (for learners and teachers);*
- *Methodological guides (for teachers);*
- *Language manuals (for learners and teachers);*
- *Dictionaries;*
- *Foreign language grammar books;*
- *Foreign language reading books;*
- *Conversation books;*
- *Foreign language song books;*
- *Collections of language games;*
- *Collections of nursery rhymes, riddles, proverbs, dialogues, etc.;*
- *Magazines in foreign language.”*¹

Textbooks

Probably the most significant person in the field of textbook analysis and writing was Comenius who is generally considered to be a teacher of the nations and also the father of the textbook theory. Another significant person is Herbart, who created the basic division of textbooks already in the 19th century. According to him, a textbook comprises of *“an introduction, explanation of new information and revision by means of a control question.*

¹ Translated by Turčinová, K.

The main emphasis is on the content of teaching (materialistic approach) and its verbal representation”² (Pokrivčáková, 2004, p. 25).

Although textbooks have usually been considered as old-fashioned teaching aids, they still survive and provide a stable basis for the whole teaching-learning process and they still serve as one of the most inevitable didactic aids for teachers and learners. As stated by Šlégrová (2007, p. 49) probably the most significant advantage of the textbooks is that they are always available, unlike CD-ROMs, television programmes or videos. Textbooks can simply be taken out of the schoolbag or off the shelf while multimedia need other devices to run and preview them. On the other hand, textbooks always need to be updated and therefore reprinted, while multimedia can be easily and more economically distributed on the Internet.

A **textbook** is considered to be the primary and standardized source of didactic information and it represents didactic transformation of cultural contents into the education process (Průcha, 1987, p. 45; Skalková, 2007, p. 103).

Just like all other materials intended for didactic purposes, textbooks have their **didactic functions** as well. We can distinguish the following ones (Turek, 2008, p. 318; Průcha, 1987, p. 46):

1. Informational
The textbook presents the information and determines the basic knowledge that has to be acquired by the students.
2. Transformational
The textbook provides didactic interpretations of scientific and general knowledge.
3. Systematic
The textbook ensures the logical sequence of information, its organization into a logical system.
4. Strengthening the knowledge and self-control
The textbook offers help, support and feedback during the acquisition of knowledge and it helps to orientate in the acquired knowledge while applying it in practice.
5. Self-educational
The textbook stimulates the students to acquire knowledge independently and develops their motivation to study.

² Translated by Turčinová, K.

6. Integrational
The textbook offers a basis for understanding and integration of further information gained from other sources.
7. Coordination
The textbook provides optimal functional usage of other didactic tools and equipment that serve for expansion and reinforcement of the information.
8. Formative and educational
The textbook develops the learners' skills and forms their personality.

Like the whole teaching process, textbooks have been modernized in recent years as well. Pokrivčáková (2003, p. 75) emphasizes the new position of textbooks. As she states, there are three main **functions** that textbooks have to fulfill:

1. *“Textbook as a curricular project;*
2. *Textbook as a resource of content of education for students;*
3. *Textbook as a didactic aid for a teacher.”³*

As for English language teachers, we point out the importance of key principles in EFL textbook that respect learning styles (Tandlichová, 2003, p. 83). The **principles** are the following:

- To respect the cultural context;
The textbook should comprise not only the target culture of the foreign country, but also the culture of the native country.
- To focus on key notions;
The textbook should incorporate information necessary for the fulfillment of content of curricula.
- To respect the learners' previous knowledge and inter-subject relations;
The textbook should be logically build on the previous knowledge from the given subject (also on the previous years' textbooks) and to incorporate knowledge being taught on other subjects, e.g. history, geography, etc.
- To respect the cognitive requirements;
The textbook should support and develop the students' creative thinking.

³ Translated by Turčinová, K.

- To offer space for the usage of the knowledge;
The textbook should enable and support the students to apply their knowledge in practice.
 - To respect the variability of learning styles;
The textbook should contain such types of exercises, which meet all learning styles of the students, e.g. visual, auditive, etc.
 - To respect the long-term and short-term memory.
The textbook should contain enough kinds of exercises that provide reinforcement and revision of the presented information.
- These principles are naturally applicable and usable in terms of any other textbooks, not only for the ELT ones.

The structure of textbooks

A textbook is generally considered to be a structured system consisting of partial components. Although these components are divided into two main groups **textual** and **extra-textual components**, they are closely connected, depend on each other, support the verbal description and provide a better understanding of didactic texts. These two components have further divisions, which are illustrated below in the following figure (based on Miháľechová, 2008, p. 9):

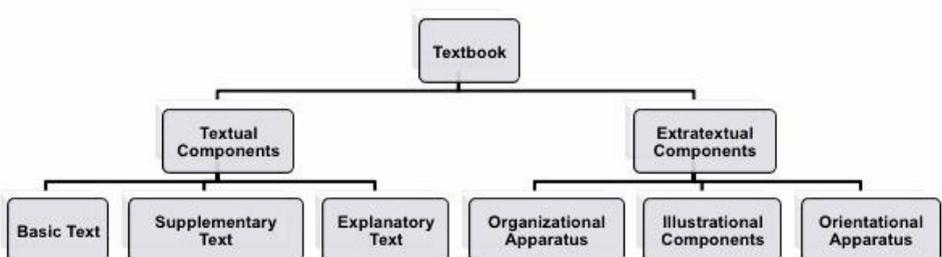


Fig. 3: Textbook components

As we now focus on the textbooks only from the textual point of view, we provide a description of the three crucial elements of textual components, the basic, supplementary and explanatory texts. According to Turek (2008, p. 323), they are described in the following way:

- The **basic text**, as we can presume, comprises facts, notions, measures, theories, principles and rules, examples, generalizations and evaluations.
- The **supplementary text** serves to fixate and reinforce knowledge presented in the basic text. It deepens the emotional impact of the textbook on the students and it enables the individual approach towards them. Here belong e.g.: statistical data, extracts from literary works, etc.
- The **explanatory text** is mainly used by students for self-study. These are for example the notes and explanations, commentaries to diagrams and graphs, etc.

Textbook Research

Unfortunately unlike in other countries, textbook research has never been a main priority in educational research in Slovakia. Although if we take into account the research of our neighbors from the Czech Republic, we can state that authors like Průcha (1984, 1985, 1987, 1998), Pluskal (1998) and recently Hrabí (2008, 2009) have contributed a remarkable amount to textbook research.

Along with Průcha (1998, p. 43), we distinguish four main **fields** of textbook research:

1. General characteristics of textbooks;
2. The functions of textbooks;
3. The results and effects of textbooks;
4. Measurement of textbook parameters.

Although the above mentioned fields are divided into four separate ones, they are often mixed or influenced by each other. According to Průcha (2009, p. 269), the **aims** of textbook research are the following:

1. *“To analyze their functional characteristics in relation to educational processes, in which the textbooks have to serve;*
2. *To correct the newly produced textbooks in those parameters, that are indicated as inconvenient;*
3. *To offer users (teachers and headmasters, parents and students) information about the quality of the parameters of various textbooks.”⁴*

⁴ Translated by Turčinová, K.

The **methods** of textbook research can be divided into the following types, as stated by Průcha (ibid., p. 267):

- Objective analysis of textbook parameters;
Via this type of research method we observe and compare measurable units of textbooks.
- Subjective analysis of textbooks;
We use special questionnaires or evaluation scales, e.g. Likert scale, to analyze and evaluate various characteristics of textbooks.
- Experimental research of textbooks;
For example what effects are being evoked by a change of certain parameters of textbooks in the knowledge of students.
- Testing;
By this method we test and evaluate the knowledge of students for example in relation to the curriculum.
- Comparison.
We compare the textbooks from various points of view, e.g. the historical development of the textbooks, textbooks for the same subject from different countries, etc.

Textbook researchers in Slovakia and the Czech Republic have mainly concentrated only on the methods of objective analysis so far. According to Pavlovkin and Macková (1989, p. 86) the first considerable studies in textbook research began in the 1940's. These studies attempted to define the readability of a text according to some of its quantitative features, e.g. length of sentences counted by the number of words, occurrence of new terms and scientific words which were not in the list of ordinary words and so on. All of them originated from the analysis of the text itself. Skalková (2007, p. 105) on the other hand mentions, that already Příhoda did empirical and theoretical research in 1927 and Langr and Váňa in 1944. After the 1970s, each developed country started to deal with textbook research. In Austria it was Bambergger and Vanecek, in France Choppin, in the Scandinavian countries Johnsen, in the former Soviet Union Zujev, in Germany Baumann, etc.

The first "boom" of textbook research in Slovakia and the Czech Republic was in the 1980s and the early 1990s. Afterwards there was a long and unproductive period until 2005 when the textbook research started to be in

the focus of researchers again. The most significant authors currently concerned with textbook research in Slovakia and the Czech Republic are Gavora, Hrabí, Janoušková, Klapko, Knecht, Maňák, Pluskal, and Průcha.

The only association dealing with textbook research and evaluation in Slovakia and the Czech Republic was the *Centre for theory of textbook creation at SPN* in Prague that existed, unfortunately, only until 1989. Since then there was no other association of that kind up until 2005. The *Group for Research on Textbooks* at the Educational Research Centre at the Faculty of Education, Masaryk University in Brno, the Czech Republic, started to run projects and carry out research on textbook analysis and evaluation. Currently, the most active members of this research group are Knecht and Maňák. The association organised a successful conference with more than 60 participants, called *Curriculum and Textbooks from the Perspective of Educational Research* in 2008. The outcome of the conference was a publication containing proceedings from the conference, entitled *Kurikulum a učebnice (Curriculum and Textbooks)* edited by Najvarová, Janík, and Knecht and published in the same year. Following on from this conference, the National Institute for Education in Slovakia alongside the organisers of the conference at Masaryk University held a conference under the same title in June 2009 in Bratislava.

The most important and renowned institutions in the international context dealing with textbook research are *The Georg Ecker Institute for International Textbook Research* in Braunschweig, Germany, the *International Association for Research on Textbooks and Educational Media* called IARTEM in Oslo, Norway, the *Japan Textbook Research Centre* in Tokyo and the *Korea Institute for Curriculum and Evaluation* in Seoul, Korea. In the USA the most well-known institution is the *American Textbook Council* located in New York. However this institution does not carry out such significant research as the previously mentioned ones.

Textbook Parameters and their Measurement

When talking about measuring the parameters of textbooks, the main purpose of any kind of textbook measurement is usually the *effectiveness*. The reason why researchers deal with textbook measurement is to find out whether the textbooks are useful, usable and appropriate for the target group of pupils or students. Although we introduce three basic parameters

that are being statistically measured, we focus on the complex method of measurement of the difficulty level of textbooks.

Statistical methods

According to Turek, (2008, p. 327) we distinguish three basic statistical methods that are being used for measuring textbook parameters:

- Average extent of a text;
- Readability of a text and
- Level of difficulty of a text.

In terms of measuring the average extent of a text in a textbook, Průcha (1998, p. 51) mentions the following three subcategories:

- The overall range of a text measured by the amount of pages;
- The range of wideness of a text and its structural components;
- The range of verbal components in a text.

The second method, readability, can be determined by various techniques. The most used ones are for example the Cloze test, Fog index, Flesch's Reading Ease and the so called SMOG (Simple Measure of Gobbledygook). Flesch's method is described in more detail in the section dealing with linguistic – quantitative methods.

To demonstrate how these methods depend on each other and how they are possible to combine, we provide an example from Pokrivčáková (2004, p. 104). She used the methods of cloze tests, measuring the average length of sentences and measuring average word density when analysing 10 university textbooks for the purpose of finding out how university students understand the textbooks they use. Based on the research results, she provided a proposal for increasing the understanding of university textbooks.

We deal with the measurement of the level of difficulty of textbooks in-depth in the following sections.

Measuring the level of text difficulty

In accordance with Průcha (1987, p. 54), text difficulty can be defined as a *“feature that is given by certain characteristics and that can be measured by adequate methods”*⁵. The same author (Průcha, 1998, p. 56) provides another definition: *“Text difficulty is a summary of such text features which exist*

⁵ Translated by Turčinová, K.

objectively in any text and in the process of learning they affect perception, understanding and processing of textual information by the subject”⁶.

As the measurement of the level of difficulty is a frequently used method in textbook research, we decided to deal with this important issue in separate sections below.

Significant formulae for measuring text difficulty

Mikk, an Estonian psychologist (Průcha, 1987, p. 54) examined 124 characteristic features of texts and found out that many of these features mutually correlate. Therefore he reduced the amount of characteristics and in 1981 created the following formula:

$$X = 0,131 X_1 + 9,84 X_2 - 4,59$$

where:

X = degree of text difficulty;

X₁ = average length of sentences in number of characters;

X₂ = average abstractness of repeated nouns (according to a three-degree scale).

Although this formula measures text difficulty, Mikk focused most of his work on measuring the readability of textbooks.

Another significant formula for measuring text difficulty is the one that was developed by Swedish author Björsson in 1968. The so-called **LIX formula** is probably one of the easiest to use and therefore many authors (among them Průcha as well) consider it as not being a valid one. Björsson's formula:

$$LIX = L_m + L_o$$

where:

LIX = degree of text difficulty;

L_m = average length of a sentence in number of words (in a 200 sentence sample);

L_o = average length of words with more than 6 letters (in a 2000 word sample).

⁶ Translated by Turčinová, K.

Průcha in his work (1998, p. 57) divides the methods dealing with measuring text difficulty into linguistic-quantitative and subjective.

1. Linguistic – quantitative methods;

They define the difficulty of textbooks according to their appearance, proportion, and arrangement of measurable units of verbal text;

2. Subjective methods.

The measurement in these methods is performed by interviewing specific kinds of groups of subjects, e.g. experts or direct users of the texts, e.g. the students or the teachers.

Linguistic – quantitative methods

As we have previously mentioned, **Flesch’s method** of using **Reading Ease** (RE) is used for measuring the readability of a text. This method uses a scale from 0 to 100, where 0 stands for the least difficult and 100 stands for the most difficult. The measure comprises the following steps (Průcha, 1998, p. 57):

1. To choose a sample from the text, e.g. of 100 words;
2. To find out the number of syllables in each 100 word sample = SL;
3. To count the average length of sentences in terms of the number of the words = WL;
4. To insert the gathered data into the formula.

$$RE = 206,853 - 0,846 SL - 1,015 WL$$

This formula was later recounted and is now called Flesch-Kncaid Grade-Level formula. This method became one of the most used methods for measuring the difficulty and evaluating the readability of texts.

A Slovak linguist **Mistrík** developed his formula for measuring text difficulty in 1968. It consists of the following three parameters (Průcha, 2002, p. 285):

1. V = average length of sentences, meaning the indication of difficulty of expressed ideas;
2. S = average length of words in terms of the number of syllables, standing for the indication of the difficulty of notions in the text;
3. I = index of repeated words, being the characteristic of the lexical variability of the text.

The formula is the following:

$$R = 50 - \frac{V \cdot S}{I}$$

In this measurement, the scale is from 0 – 50, where 0 – 10 stands for the most difficult texts and 40 – 50 for the easiest ones.

We chose to provide an example of combining other methods for measuring text difficulty provided by Gavora. The author studied text comprehension in pedagogical communication at Junior Schools in Slovakia. The research investigated the relationship between the comprehension of higher levels of text, the inter-sentence comprehension and the identification of the main points of the text and the pupil characteristics such as age, sex, verbal IQ and school achievement (Gavora, 1988, p. 245). The research used a variety and combination of the following research methods: reliability was examined by means of Kuder-Richardson's formula, the level of verbal abilities via the Slovak standardised version of Vážna's intelligence test, for the teacher's evaluation of the students a simple six-level scale was used and the data was processed by a combination of statistical methods of CHI and correlation analysis. Later the author (1992, p. 40) mentions the usage of Průcha's modified version of Nestler's method for the analysis of didactic texts. We outline this example in the following pages.

Although the above-mentioned statistical methods seem to provide sufficient basis for measuring the difficulty of texts, Pokrivčáková (2004, p. 103) noticeably remarked that the statistical methods *“cannot be considered as completely valid as:*

- *they perceive the text separately from the reader, they do not take the reader's personality, his/her education, language skills, motivation, etc. into account;*
- *they are based only on the external features of the text (number of sentences, words, syllables) and they do not take into account the specific arrangement of these language elements and their mutual relationships (cohesion, coherence, modality, etc.) and they are also not able to notice the presence of such specific elements as abstractness/concreteness, imagery and expressiveness/neutrality”⁷.*

When trying to find a solution for similar ideas a few decades ago, one of the most important researchers and the author of numerous pedagogical works – Průcha improved a method created by a German psychologist, Nestler in 1976. Nestler's method became the most used method in the

⁷ Translated by Turčinová, K.

Czech Republic and Slovakia and it served as a basis for creating formulae for many researchers. The subsequently mentioned methods belong to the group of subjective methods.

The difference between Nestler's method and all the previously mentioned ones used for measuring text difficulty can be clearly seen from the formula itself (Průcha, 1987, p. 55):

$$T = T_s + T_p$$

where:

T = degree of text difficulty;

T_s = degree of syntactic difficulty, being measured by 2 features of sentence structure;

T_p = degree of semantic difficulty, being measured by 3 features of words.

This formula was modified by Průcha in 1984 and later by Pluskal in 1996. For this reason the method is called *The Complex Measurement of Text Difficulty by Nester-Průcha-Pluskal*. The main reason why Průcha started to work on improving the formula was that in the 1970's and 1980's the textbooks used in the former Czechoslovakia were too difficult and it was not possible to prove this fact objectively. The measurement had to fulfill the following three criteria (Průcha, 1998, p. 61):

1. The measurement has to be complex enough and include as the quantitative characteristics of the textbook so the qualitative (semantic) ones;
2. The measurement has to be valid enough in regard to reflect the real level of difficulty;
3. The measurement has to be operative, i.e. manageable for practical requirements without the usage of complicated computer technology.

The above-mentioned Nester – Průcha – Pluskal measurement has the subsequent formula (Průcha, 1998, p. 62):

$$T = T(s) + T(p)$$

where:

T = text difficulty;

T(s) = syntactic difficulty;

T(p) = semantic difficulty;

T(s) and T(p) are counted according to the following formulae:

$$T(s) = 0,1 \times V \times U$$

$$T(p) = 100 \times \frac{\Sigma P}{\Sigma N} \times \frac{\Sigma P(1) + 3 \Sigma P(2) + 2 \Sigma P(3) + 2 \Sigma P(4) + \Sigma P(5)}{\Sigma N}$$

where:

V = average sentence length;

U = average length of sentence parts (predicative propositions);

N = amount of all words;

P = amount of all terms;

P (1) = common terms;

P (2) = scientific terms;

P (3) = factual terms;

P (4) = numerical data;

P (5) = repeated terms.

The range of text difficulty is from 1 up to 100, where 1 is the least difficult and 100 is the most difficult.

When measuring text difficulty, the researchers usually count *the coefficient of scientific information density*, too. This coefficient has the following formulae (Průcha, 1998, p. 138):

$$i = 100 \times \frac{\Sigma P(2) + \Sigma P(3) + \Sigma P(4)}{\Sigma N}$$

$$h = 100 \times \frac{\Sigma P(2) + \Sigma P(3) + \Sigma P(4)}{\Sigma P}$$

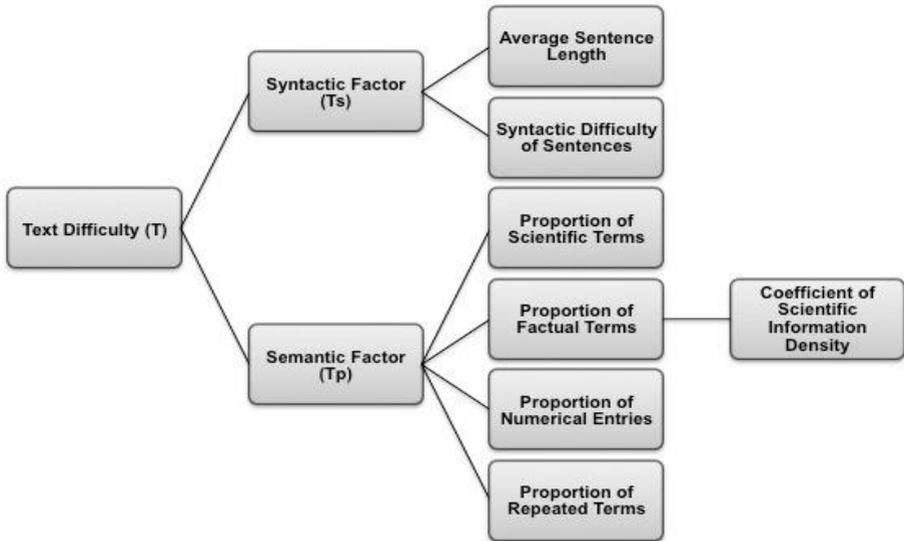
where:

i = the proportion of terms carrying scientific information in the overall amount of words;

h = the proportion of terms carrying scientific information in the overall amount of terms.

The *i* and *h* coefficients are expressed in percentage.

For easier understanding we provide a scheme of text difficulty (based on Průcha, 2009, p. 267):



Scheme 2: Text difficulty

In the following examples of studies we provide the description of usage of the Nester-Průcha-Pluskal measurement.

Example 1: The complex analysis done in 1980's by Průcha (1987, p. 57)

The research sample consisted of 3 groups of textbooks for various subjects:

- 90 textbooks for 1st - 8th grade elementary school;
- 20 textbooks for 1st grade specialized secondary school;
- 6 textbooks for 1st grade grammar school.

The measured parameters were the following:

1. Overall extent of textbooks:
 - a. In particular grades;
 - b. In particular subjects.
2. Extent of verbal text:
 - a. In particular grades;
 - b. In particular subjects.

3. Verbal text difficulty:
 - a. Difficulty of particular textbooks;
 - b. Average difficulty in particular grades;
 - c. Average difficulty in particular subjects.
4. Potential didactic effectiveness of textbook:
 - a. Difficulty of particular textbooks;
 - b. Average difficulty in particular grades;
 - c. Average difficulty in particular subjects.

The research results were surprising as some of the textbooks for lower grades were more difficult than those intended for the higher ones, e.g. Geography 5th grade was more difficult than Geography 6th and 7th grade. This led to proving the problem we mentioned previously – the teachers were aware of the fact that the textbooks were too difficult but they could not prove it scientifically. The textbooks contained an excessive amount of scientific and factual terms inappropriate to the level of the students' knowledge.

The potential didactic effectiveness was measured by dividing the textbook into 36 components – each one with a specific function. These components were arranged into three groups according to their didactic function and into two according to the expression:

1. *Presentation (14 components)*
 - *Verbal (9)*
 - *Pictorial (5)*
2. *Learning adjustment (18 components)*
 - *Verbal (14)*
 - *Pictorial (4)*
3. *Orientalional (4 components)*
 - *Verbal (4)*

The components allowed the author to measure separate coefficients, e.g. of verbal or pictorial component usage or the coefficient of the usage of learning adjustment, but also an overall coefficient of potential didactic effectiveness called “*E*”. All coefficients are measured in percentage, where 100% is the highest potential effectiveness of a textbook.

Example 2: Gavora's usage of Průcha's method

Gavora in his work *Žiak a text* (Learner and Text, 1992) presents his research where he measured text difficulty by inserting data into Průcha's modified version of Nestler's formulae. He used the method of measuring text difficulty for gaining information and data for analyzing the aspects of students' understanding of extracts from Slovak textbooks.

In one research (Gavora, 1992, p. 40), a test for students was assigned to identify the abilities to understand a text. The reliability was verified by the usage of Kuder-Richardson's test and the text difficulty was measured by Průcha's modified version of Nestler's method.

Another example of using this method was provided when he wanted to find out how students select information (*ibid.*, p. 48). This research was carried out on three short texts, all the same length. The usage of Průcha's modified version of Nestler's method measuring text difficulty provided the basis for this research, as Gavora only used it for analyzing the chosen parts of texts on purpose to ensure the regarded difficulty.

The last example we mention is the usage of the method to ascertain the text condensation, which is the process of verbal reduction of texts. Yet again, the lexical-syntactical difficulty was measured to ensure the appropriate level of difficulty according to the needs of the research sample and the research itself (*ibid.*, p. 56).

Example 3: Pluskal's research results

The reason why the Nester-Průcha-Pluskal method was also named after Pluskal is that he carried out a significant research in 1996 in which he analyzed geography textbooks. The research results showed, that although the textbooks were intended to be the same level, various publishing companies released textbooks with different levels of difficulty. Pluskal, J. (1996, p. 62) emphasizes that the positive feature of the modified method is the didactic objectiveness. According to him it serves not only for the determination of the level of text difficulty, but also for providing an explanation of the reason of difficulty and it shows the possibilities for potential corrections. The measurements resulted in the appointment of recommended maximal amount of text difficulty for textbooks published in Czech Republic for particular grades at elementary schools.

Example 4: Hrabí's modification of Nester-Průcha-Pluskal's method

Hrabí, L. is one of the most significant current researchers dealing with measuring text difficulty in the Czech Republic. She came to the conclusion that Nestler's method that was later modified by Průcha and Pluskal still needs to be improved. The most notable change is her integration of *the coefficient of repeated terms*. For a clearer understanding we provide the following table adapted from Hrabí (Knecht, Janík, 2008, p. 178):

Tab. 6: Differences between Průcha's, Pluskal's and Hrabí's methods

	Průcha's method	Pluskal's method	Hrabí's method
Amount of analyzed samples	5 or 10 samples at least by 200 or 100 words	5 or 10 samples at least by 200 or 100 words	10 samples at least by 100 words
Categories of terms	P 1 = common terms P 2 = scientific terms P 3 = factual terms and numerical data	P 1 = common terms P 2 = scientific terms P 3 = factual terms P 4 = numerical data P 5 = repeated terms	P 1 = common terms P 2 = scientific terms P 3 = factual terms and numerical data P 4 = repeated terms
Balance of particular term categories	P 1 – balance 1 P 2 – balance 2 P 3 – balance 3	P 1 – balance 1 P 2 – balance 3 P 3 – balance 2 P 4 – balance 2 P 5 – balance 1	P 1 – balance 0.5 P 2 – balance 2 P 3 – balance 2 P 4 – balance 1
Coefficient of density of numerical terms	0	$n = \frac{\sum P_4}{\sum P} \times 100$	0
Coefficient of density of repeated terms	0	0	$o = \frac{\sum P_4}{\sum P} \times 100$

L. Hrabí's research on natural history textbooks

The research sample consisted of 22 textbooks for natural history for students in 6th – 9th grade. She measured 10 samples of 100 words (ΣN). The measurements contained 11 characteristics of difficulty.

T and Ts were measured by the Nester – Průcha – Pluskal formulae, but the measurement of Tp was measured differently (Knecht, Janík, 2008, p. 177):

$$T_p = 100 \times \frac{\Sigma P}{N} \times \frac{\frac{\Sigma P_1}{2} + 2 \Sigma P_2 + \Sigma P_3 + \Sigma P_4}{\Sigma N}$$

where:

$\frac{\Sigma U}{\Sigma N} \times 100$ – proportion of verbs (%);

$\frac{\Sigma P}{\Sigma N} \times 100$ – proportion of substantive terms (%);

$\frac{\Sigma P_1}{\Sigma N} \times 100$ – proportion of common terms (%);

$\frac{\Sigma P_2}{\Sigma N} \times 100$ – proportion of scientific terms (%);

$\frac{\Sigma P_3}{\Sigma N} \times 100$ – proportion of factual terms and numerical data (%);

$\frac{\Sigma P_4}{\Sigma N} \times 100$ – proportion of repeated terms (%).

Based on this, Hrabí measured the subsequent (Knecht, Janík, 2008, p. 179):

- *“The average amount of overall text difficulty for individual grades;*
- *The average density of degree of syntactic difficulty of texts for individual grades;*
- *The average amount of difficult terms”.*

As a result, she presented the recommended *scale of difficulty for Czech natural science texts.*

Her research on biology textbooks from the same year had the same research sample and same amount of characteristics analyzed. In her article (2008, p. 28) she also provided the formulae for measuring:

$$\bar{x} = \frac{\Sigma x}{n}$$

– arithmetic mean;

$$s = \sqrt{\frac{\sum (x - \bar{x})^2}{n-1}}$$

– standard deviation;

$$s_{\bar{x}} = \frac{s}{\sqrt{n}}$$

– mean error;

$$v = \frac{s}{\bar{x}} \times 100$$

– variational coefficient (%).

The results, similarly to the previously mentioned research, were used for the formation of a generally recommended scale for measuring biology textbook difficulty in Czech Republic.

Another Hrabí's study was published in 2009 (p. 31). This research was carried out on biology textbooks published by the FRAUS publishing company. The research sample consisted of biology textbooks for 6th – 9th grade by FRAUS publishing company. The author chose 10 samples of 100 or more words ($\sum N$). The measurements were carried out on 15 characteristics of text difficulty. The difference from the two former research studies is, that here the author measured these additional coefficients:

$$i = 100 \times \frac{\sum P2 + \sum P3}{\sum N} \quad \text{– coefficient of density of scientific and factual information (\%)}$$

$$h = 100 \times \frac{\sum P2 + \sum P3}{\sum P} \quad \text{– coefficient of density of scientific and factual information (\%)}$$

$$o = \frac{\sum P4}{\sum P} \times 100 \quad \text{– coefficient of repeated information (\%)}$$

where:

$\sum N$ = number of words

$\sum P$ = number of substantives

Example 5: Janoušková's usage of the complex measurement of text difficulty

Janoušková carried out research on measuring coefficients of didactic effectiveness and the adequacy of text difficulty. The results of her research proved that there is a relationship between these two factors – the more the text difficulty gets closer to the ideal rate, the higher the didactic effectiveness of the textbook. The research sample consisted of 14 geography textbooks for secondary school students.

The practical outcome of the research was the proposal of creating scientific teams that would carry out analyzes of scripts of future textbooks before their publishing. The scientific teams would comprise scientific workers, expert teachers and teachers teaching the particular subjects on a daily basis (Janoušková, 2009, p. 69). Her other valuable remark is that she also suggests to create a common database (ibid., p. 70) where all of the research results on measuring textbook parameters, e.g. the text difficulty could be uploaded and be available for teachers of particular subjects.

Example 6: Pokrivčáková's research on potential didactic effectiveness

Another example of the usage of Průcha's method of measuring potential didactic effectiveness is present in Pokrivčáková's work (2004) where she applied and modified this method for analyzing university textbooks. The aim of the research was to find out about the current form of university textbooks from the viewpoint of their macrostructure. The research sample consisted of 20 university textbooks chosen according to specific criteria.

The modification Pokrivčáková made was that she reduced the 36 components to 21. Some of the categories were left out, e.g. art illustrations and others were merged, e.g. pictorial material, photos, illustrations form one group (Pokrivčáková, 2004, p. 80). The reason of the reduction was that the university textbooks are created for and aimed at a different level as the ones intended for elementary or secondary schools. They have to contain much more factual and scientific terms than those designed for general knowledge.

The outcomes of the research, unfortunately, showed that the average didactic effectiveness of the measured books was very low – 45,71% (ibid., p. 84). On the other hand, we must not forget that 15 components left out from the measurement. Pokrivčáková (ibid., p. 90) also mentions that the authors of the analyzed textbooks paid more attention to the content of the textbooks than to its presentation. That means that the students using the analyzed textbooks do not have many possibilities to apply their theoretical knowledge in practice or to revise and self-evaluate their work.

Summary

In our opinion, textbooks are – and will remain the most discussed, analyzed and used types of didactic aids independent from any modernization of the teaching-learning process. Measuring text difficulty is, in our opinion, very important not only when we need to know the level of

difficulty of a particular textbook or didactic text, but also when considering the choice of textbooks to use with students. By analyzing the difficulty, we can compare and contrast various textbooks, evaluate them and decide whether they meet the level of knowledge and most importantly whether they are appropriate for the students.

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Abstract

This paper deals with the description of didactic texts, textbooks and textbook research. The core of the study is the analysis of parameters measured on texts, especially the measurement of text difficulty and the measurement of the effectiveness of didactic texts. The measurements are supplemented by examples of various research studies carried out by Czech and Slovak researchers that looked at the measurement of text difficulty and the effectiveness of didactic texts.

Keywords

didactic text, textbook, textbook research, textbook parameters, text difficulty, effectiveness

Extent: 36 655 characters

EXPERIMENT IN E-LEARNING RESEARCH

Zuzana Rebičová

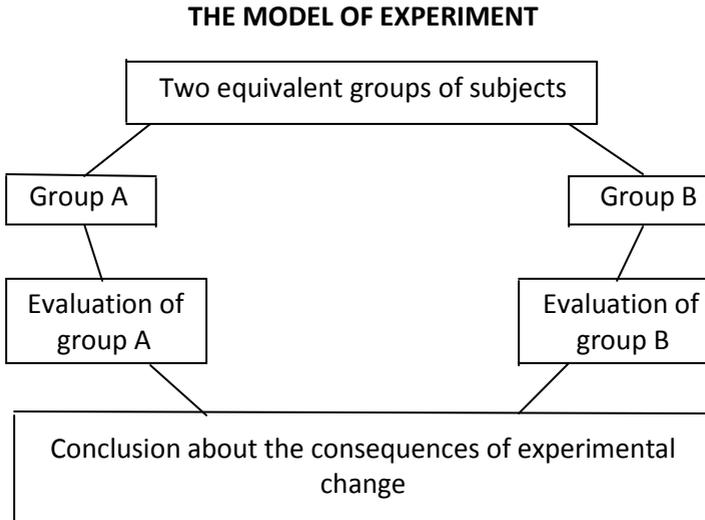
Experiment has been regarded as the basis of scientific method for a very long time. This method has been used in the physical sciences where the subject-matter can be studied in a laboratory under controlled conditions. Experiments now play an important role in research in Psychology, Sociology and Anthropology (Kumar, 2002, p. 215).

Social experiment has been defined by a lot of writers. Jahoda regards social experiment as a method of testing hypotheses. Greenwood says that „an experiment is the proof of a hypothesis which seeks to hook up two factors into a causal relationship through the study of contrasting situations which have been controlled on all factors...” According to Festinger, „the essence of an experiment may be described as observing a dependent variable as the consequence of an independent variable influence.“

The basic factor is the control over the subject of study and manipulation of the independent variable to study its effect upon the dependent variables. In the narrowest sense only pure laboratory experiments are to be included in the category of experiments, where the experimenter exercises absolute control over the subjects (Kumar, 2002, p. 215).

Experiment (the experimental method) is a quantitative research method, which has several basic elements. It has at least two close groups of people, similar in composition, which function in various conditions. These conditions are strictly controlled and the influence of both groups is evaluated at the end of the experiment. People who participate in the experiment are called **subjects**. The choice of them is realized according to certain features. There are two groups, the **experimental group** and the **control group**. The **experimental group** is the group of subjects on which the experimental treatment is carried out. The **control group** is also part of the experiment, but it is the group of subjects used for comparison in which the experimental treatment is not realized. Two types of tests are used, a **pre-test** – entry test and a **post-test** – final test. The element of the experiment

that can change and receive values or features is the *variable*. The variable with which the researcher manipulates in the experimental group is an *independent variable*. The consequence of the independent variable influence is a *dependent variable* (Gavora, 1999, p. 141).



(from Gavora, 1999, p. 142).

Experiments can be divided into various classes according to the type of setting, nature and extent of control. Greenwood has mentioned these five types of experiments:

1. trial and error experiment;
2. controlled observational study;
3. natural experiment;
4. ex-post-facto experiment;
5. laboratory experiment.

Trial and Error Experiment

It is the earliest form of experiment. The researcher does not prepare a structured plan of study. He/ she prepares a hypothesis and tries to test it on actual social conditions. He/ she may start his/ her studies on a small group, but later he/ she can enlarge it or change it. This type of experiment cannot be called scientific and it is usually a waste of time.

Controlled Observational Study

This includes the observation of the phenomena under controlled conditions. A stimulus is provided to the subject and changes are observed to find out the causal effect of the stimulus.

Natural Experiment

It is also known as field experiment because it is undertaken in a natural setting. The natural experiment is used for studying a wide variety of techniques and methods such as advertising techniques, training methods, the effects of group decisions and group participation.

Ex-post-facto Technique

This technique (ex-post=additional) is used to study the varying influence of two identical factors. People (subjects) have self-selected levels of an independent variable or a treatment is naturally occurring and the researcher could not control the degree of its use. The researcher starts by specifying a dependent variable and then tries to identify possible reasons for its occurrence. This type is very common when using human subjects in real-world situations and the investigator comes in "after the fact". In this technique, specific reasons for the differences would be explored, such as differences in income, ethnicity, parent support, etc. (Diem, 2002). This technique moves from present to future, but this system exhibited one weakness. It was sometimes very difficult to locate the subjects after a sufficient period of time. And therefore, Mr. Chapin, one of the first American sociologists, projected the study backward from the present to the past rather than from the present to the future as is usually done. Chapin tried to apply the research procedures of the physical sciences and the techniques of statistics to studies of social behaviour, in the areas of social and cultural change and social status (Gale Encyclopedia of Biography, 2006). He headed the important department at Minnesota from 1922 to 1953 and was strongly influenced by evolutionary theory and in the later 1920s became committed to a severe scientism. He was particularly known for his „living-room scale“, which gave numerical score to items of furnishing in order to arrive at an index of socio-economic status (Platt, 1996, p. 76). Chapin was recognized by his professional peers by election to membership in the Social Science Research Council (1922-1927) and by his elections as president of the American Sociological Association in 1935 and of the Social Research

Association in 1936. His contributions to the cause of making sociology a more exact science was acknowledged by the American scientific community when he was elected vice president of the American Association for the Advancement of Science in 1943 (Gale Encyclopedia of Biography, 2006).

Laboratory Experiment

Festinger defines a laboratory experiment “as one in which the investigator creates a situation with the exact conditions he wants to have and in which he controls and manipulates other variables”. The setting of a laboratory experiment is artificially created. For example, if we do an experiment with school boys in the school itself it would be a field experiment (the setting is natural), but if we create a small classroom and experiment upon it (the setting is artificially created), it is a laboratory experiment (Kumar, 2002, p. 216-217).

Planning an experiment

The researcher is an active manipulator of the situation so he/ she must plan things in advance and in detail in order to get the best result. The planning of the experiment consists of the following steps:

1. Selecting the Problem

Not every kind of problem can be studied through the experimental method. So we have to choose one, the most important problem. Then the hypothesis must be stated in a clear way.

2. Selecting of the Setting

The setting is the background in which the experiment will be realized. In the case of the laboratory experiment the setting has to be created artificially and the researcher must decide how it can be done. If it is a field experiment we have to find a natural setting where the experiment can be carried out. The main features of a good setting are:

- a) the situation must contain the phenomena to be studied;
- b) the phenomena must occur in a sufficiently pure form, they must be visible;
- c) the researcher must have the power to manipulate the independent variable. This is the most important condition, because there can be two problems: the phenomena may not permit manipulation or the owner of the setting may not permit manipulation;

- d) the researcher must have the power to control other factors which may destroy the experiment;
- e) the researcher must have the freedom of access to the data and also the freedom to publish the findings.

3. *Pilot Study*

It is conducted in advance of a planned project, to test aspects of the research design and to allow necessary adjustment before final commitment to the design. The researcher will be able to know more precisely the various causative factors involved, the nature and working of the institution, the extent of co-operation. He/ she can also discuss the plan of the experiment and its objectives with the key people to develop their interest and secure their co-operation.

4. *Research Design*

The researcher cannot check all factors and in order to avoid the effect of negative factors he/ she should use these methods:

- a) use of control groups;
- b) control through measurement;
- c) replication;
- d) insulation.

Control groups

We have to select more than one similar group. The one group in which the stimulus will be applied will be known as the experimental group while the other where no stimulus will be provided will be known as the control group. The control group must be similar in all respects or in all those aspects that are likely to influence the effect of the causative factor. There are 3 methods used for the selection of the control group:

- *Precision Matching*
Every person in the experimental group has a parallel in the control group but the matching of individuals is very difficult and can be achieved only when the groups are very small in size.
- *Matching frequency distribution*
This is a method of collection matching. For example, if one group contains 80% literate, 50% men, another group should also contain the same percentages. This method is not as precise as *Precision Matching*

because the individual behaviour is governed by total qualities and not by a single quality.

- *Randomisation*

According to this method two samples are selected randomly and it is expected that they will be similar. It eliminates the problem of choice. But perfect randomization is not possible in small groups and experimentation with a large group would create other complicated problems.

Control through measurement

At the time of study we should locate the causative factors at work and measure their degree. At the end of the experiment we should measure them again and calculate the change in the results. The success of this method depends on our knowledge of causative factors and the correct measurement of their influence. This method is not generally used because of its difficulty.

Replication

The experiment is repeated in the same setting. It can be successful only if no major change has taken place in the nature and composition of the subject.

Insulation

It is one way of controlling the phenomena, but complete insulation is impossible.

Problems of Cooperation

Cooperation is very essential for successful management of the experiment. The following methods can be used:

- Preliminary consultation

First of all the researcher must find out the key people who can be helpful. These people must be interested in the outcome of the research findings.

- Joint planning

The planning of the experiment should be done in joint consultation with the key people. The researcher must explain to them the purpose of the experiment and the various steps that are going to be taken.

- Paid participants

In some cases cooperation is paid. Paid participants have been used in many laboratory experiments (Kumar, 2002, pp. 218-221).

The researcher has to face various difficulties, some of them are:

- **Difficulties of setting**
The first major difficulty is to find a proper setting and it is not always possible. There are lots of social phenomena which cannot be realized in the laboratory under created conditions. When it is a field experiment in a natural setting there is the problem of finding a place where the phenomena is found in sufficiently pure form to follow observation.
- **Difficulties of Cooperation**
The lack of interest of the parties makes active cooperation difficult. When cooperation is available from one group, it may not be available from another group, especially if the two groups are opposed to each other.
- **Difficulty of Control**
For the experiment to be successful it is necessary that all causative factors except the one that is under study must be unchanged. This is extremely difficult. It is very difficult to have a full knowledge of all the causative factors at work. Even if they are known it is very difficult to control them. The social phenomena is affected by a number of outside conditions and it is not possible to control them or to insulate the experimental group from outside influences (Kumar, 2002, pp. 221-222).

The advantages of the experimental method

- It permits the determination of the cause and effect relationship more clearly than other methods. Unless the cause and effect are clearly located it is not possible to control the phenomena which is the primary objective of any research.
- It is more precise and accurate. We can locate with precision the effect of varying degrees of stimulus.
- It is the best method for testing a hypothesis. It is only through the experimental method that a hypothesis can be tested and verified. Testing of a hypothesis requires a study of relationship under varied conditions which is only possible by using the experimental method.
- The experimental method has been universally considered as the most scientific method. Its use in social sciences has been limited only because of the difficulties presented by social phenomena and our lack of knowledge of it. As our knowledge of the social phenomena increases

we will be in a position to make increasing use of the experimental method (Kumar, 2002, p. 223).

The disadvantages of the experimental method

- It is not possible to completely control all variables.
- The problem of the laboratory experiment is artificiality, the experiment is not typical of real life situations.
- Behaviour in the laboratory may be very limited because of the artificiality of the lab (The experimental method, 2006).

Experimental research

“Researchers study variables, which are characteristics that take on different values across people or things. *Experimental research* involves a study of the effect of the systematic manipulation of one variable on another variable. The manipulated variable is called the *experimental treatment* or the *independent variable*. The observed and measured variable is called the *dependent variable*. For example, a university researcher would like to investigate the effect of providing online feedback to students immediately following course examinations. Using two sections of economics taught by the same professor, the researcher using a random procedure would select one section to receive immediate online feedback about their performance on test questions. Another section would receive feedback during their next class session (independent variables). The researcher would compare the two sections, exam scores and their final grades in the course (dependent variables). If test scores and final grades were higher in the section receiving online feedback, the researcher could conclude that there is evidence the online feedback (independent variable) contributed to greater learning than the in-class feedback” (Ary, Jacobs, Razavieh, Sorensen, 2009, p. 26).

Experimental design

“An experimental design serves two functions:

1. It establishes the conditions for the comparisons required to test the hypotheses of the experiment;
2. It enables the experimenter, through statistical analysis of the data, to make a meaningful interpretation of the results of the study” (Ary, Jacobs, Razavieh, Sorensen, 2009, p. 271).

“Preexperimental designs do not have random assignment of subjects to groups or other strategies to control extraneous variables.

True experimental designs are also called randomized designs, they use randomization and provide maximum control of extraneous variables.

Quasi-experimental designs lack randomization but employ other strategies to provide some control over extraneous variables. They are used when intact classrooms are used as the experimental and control groups” (Ary, Jacobs, Razavieh, Sorensen, 2009, p. 302).

There are two designs that are classified as preexperimental because they provide little or no control of extraneous variables. These weak designs are still used in educational research:

1. One-Group Pre-test-Post-test Design

It has 3 steps:

- a) giving a pre-test measuring the dependent variable;
- b) applying the independent variable to the subjects;
- c) giving a post-test measuring the dependent variable.

Differences with the application of the independent variable are then evaluated by comparing the pre-test and post-test scores.

(Example: An elementary teacher wants to evaluate the effectiveness of a new technique. At the beginning of the school year, the students are given a test - a pre-test. The teacher then introduces the new teaching technique and at the end of the semester he gives them the same test - a post-test. And he / she compares the scores of the students from the pre-test and post-test. The limitation of this design is that no control group is used and the experimenter does not know if any improvement in scores is due to the new technique).

2. Static Group Comparison

It uses two or more intact (static) groups, one of which is exposed to the independent variable. So we have two groups for comparison and no pre-test is used. The groups are equivalent in all relevant aspects before the study begins and they differ only in their exposure to the independent variable, which is manipulated by the experimenter. The researcher compares the groups on the dependent variable measure (Ary, Jacobs, Razavieh, Sorensen, 2009, p. 303-304).

An overview of experiments used in e-learning research

Nowadays the educational process cannot exist without the use of ICT. Information and communication technology (ICT) covers any product that stores, retrieves, manipulates, transmits or receives information electronically in a digital form. For example, personal computers, digital television, email and robots. It has been gradually implemented into the teaching process in the form of experiments. We introduce several experiments with the use of ICT.

The aim of the first experiment: *“Assessing the impact of interactive video on learning effectiveness”* which was carried out in 2005 in the USA by Zhang, Zhou, Briggs and Nunamaker Jr. was to investigate the influence of interactive video on learning outcomes and learner satisfaction in e-learning environments. A multimedia based e-learning system *Learning by asking* (LBA) was used, it integrates multimedia instructional material including video lectures, PowerPoint slides and lecture notes. It promotes high levels of interaction by allowing learners to access individual video segments directly. A student can watch a lecture with integrated instructional video, PowerPoint slides and lecture notes. He/she can see the video of the instructor, hear what he/she says and read associated slides and lecture notes. Everything at the same time (Zhang, Zhou et al., 2005, pp. 15-16).

Four different settings were studied: three were e-learning environments – with interactive video, with non-interactive video and without video. The fourth was the traditional classroom environment. The participants were undergraduate students (138) from a large university located in the south-west of the USA, the average age was less than 21. The subjects took a written test – pre-test, which included a number of true-false and multiple-choice questions. The purpose was to examine how much a subject already knew about the topic. No significant differences in pre-test scores were discovered. Then they watched the online lecture. At the end of the lecture students were given a post-test. It was again a written test consisting of objective questions about the lecture content, the questions were more specific and difficult than in the pre-test (Zhang, Zhou et al., 2005, p. 20).

The traditional classroom group took the lecture in a regular classroom, e-learning groups participated in a research laboratory at a different time the same day. The laboratory was equipped with 30 computers with high-speed internet connection and with all the necessary software already installed. Each subject had his own computer connected with a headphone set to be

able to listen to the soundtrack of the video. E-learning subjects took the online lecture using the LBA system. The LBA system for Group 1 (with interactive video) allowed subjects to interact with video through control buttons. In Group 2 (with non-interactive video) the control buttons were removed. Group 3 (without video) presented only PowerPoint slides and lecture notes. Group 4 (traditional classroom) took the lecture in a traditional format without using the system (Zhang, Zhou et al., 2005, pp. 21-22).

According to the results of this study students in the e-learning environment with interactive video (Group 1) achieved a better learning performance and a higher level of satisfaction than those in the other 3 groups.

It can be observed that nowadays information and communication technologies have gradually become an inseparable part of English language teaching as well as in the teaching of all other subjects. It is evident that the possibility of video repetition plays an important role when the students can switch on an online lecture retrospectively. When we take into consideration the first two groups that used video we find out that they achieved better results than other two groups. They remembered much more information thanks to the visual memory. Comparing the results of groups in e-learning environments, which were higher than in the traditional class, we come to the conclusion that teaching in an e-learning environment will become an inevitable supplement of the educational process in the future concerning foreign language teaching and general subject teaching.

A 13-week experimental study *“The effects of computer-assisted pronunciation readings on ESL learners’ use of pausing, stress, intonation, and overall comprehensibility”* (Tanner, Landon, 2009) was performed with 75 ESL learners of intermediate-level proficiency from 17 to 54. The participants were organized into three categories: Asian language speakers (Japanese, Chinese, Korean), Romance language speakers (Spanish, Italian, Romanian) and other languages (Haitian Creole, Russian, Armenian). They were divided into control and treatment groups. The treatment group had 11 weeks of self-directed computer-assisted practice using Cued Pronunciation Readings. In the quasi-experimental pre-test/post-test design, speech perception and production samples were collected at Time 1 (week one of the study) and Time 2 (week 13). Researchers analyzed the treatment’s effect on the learners’ perception and production of key suprasegmental features (pausing, word stress and sentence-final intonation) (Tanner, Landon, 2009, p. 51, 53).

This study examines a self-directed, computer-assisted technique that uses oral readings to improve students' perception and production of pausing, word stress and sentence-final intonation. ESL learners listen to (150-300 word) passages recorded by native speakers, they mark the location of an individual suprasegmental feature (pausing or syllable stress), practice the reading orally and then record themselves reading the passage. The Cued Pronunciation Reading tasks are self-directed, students are given an overview of pausing, word stress and sentence-final intonation patterns in English. This overview gives them the skills necessary to begin predicting the occurrence of prosodic features. Teacher involvement is minimal because students complete the tasks on their own and teachers provide no feedback on the students' recordings. To facilitate the use of Cued Pronunciation Reading tasks in a self-directed context, each Cued Pronunciation Reading was set up as a series of PowerPoint slides. Participants listened to audio recordings as many times as necessary to complete the listening (perception) activities. Six intermediate listening/speaking classes were randomly selected for the study, each taught by a different teacher. Three classes were randomly selected as the control group and the other three classes were the treatment group (Tanner, Landon, 2009, p. 53, 54).

Speech perception and production data at Time 1 and Time 2 were collected from all non-native speaking participants in the ESL program's computer lab. The total test time was 20 minutes and data collection consisted of seven computerized tasks, five spontaneous speech tasks, one perception task and one controlled production task. In the spontaneous speech tasks, participants told a story based on a sequence of pictures, suggested potential solutions to a problem illustrated in the picture sequence, expressed their opinion on a topic and explained changes. For the perception task, they listened to a passage recorded by a native speaker and marked pauses, stressed words and sentence-final intonation (rising or falling). The controlled production task consisted of reading a passage aloud. They were given one minute to read the passage silently before reading it aloud (Tanner, Landon, 2009, p. 55).

37 participants (94.8%) out of 39 agreed or strongly agreed that they could have put more effort into completing the pronunciation readings. 19 students (48.7%) completed 9 or more of the 11 Cued Pronunciation Readings. The remaining students completed 8 or fewer of the readings. Treatment group participants were positive about their use of the Cued

Pronunciation Readings. 34 from 39 students (87%) recognized that they had more work to do on their pronunciation. 32 (82%) of the students felt that as a result of the treatment, they could understand English conversations more easily and they had increased their knowledge of English. 31 participants (79%) felt that because of the Cued Pronunciation Readings, they could communicate more effectively in situations previously difficult for them, they had more confidence when speaking English in public and they could speak more fluently and correctly in English (Tanner, Landon, 2009, p. 59).

The quantitative analysis of the pre-test and post-test results revealed that treatment group participants made significant gains in three areas: perception of pausing, perception of word stress and controlled production of word stress. The treatment had a significant and positive effect on the participants' total pause marking errors, on the total number of stress marking errors and on the total number of stress placement errors produced in the controlled production task. Computer technology can help second language learners more accurately perceive and produce prosodic features. At the end we can say that self-directed, computer-assisted Cued Pronunciation Readings can provide an effective way to help students improve their ability to perceive, predict and produce prosodic features outside of the class (Tanner, Landon, 2009, p. 61-63).

Verdugo and Belmonte from Universidad autónoma de Madrid in Spain carried out an experiment on *"Using digital stories to improve listening comprehension with young Spanish learners of English"*. This study examines the effects that digital stories have on the understanding of spoken English by a group of 6-year-old Spanish learners. A pre-test and post-test was used to investigate whether internet-based technology could improve listening comprehension in English as a foreign language. 220 children and 6 teachers participated in this research, they were divided into experimental (internet-based technology) and control (traditional class) groups (Verdugo, Belmonte, 2007, pp. 87-89). Finally, the experimental group performed better than the control group in the final test.

This experiment is focused not only on undergraduates but also on children, it showed that teaching in an e-learning environment had positive results within the group of 6 year old children. We explain that the experimental group received better results mainly because of watching fairytale videos. This contributed to even better vocabulary acquisition.

The aim of the project: *“Told like it is! An evaluation of an integrated oral development pilot project”* written by Barr, Leakey, Ranchoux from Northern Ireland in 2005 was to blend collaborative and individual learning through a combination of CALL programs and online activities alongside traditional face-to-face conversation classes. The students were divided into four small conversation classes of between 5 and 11 students. Two groups were comparison, control groups taught in the traditional class, usually in the classroom or in language laboratory, never in the multimedia laboratory. Two groups were experimental groups using technology and taught in the multimedia laboratory. Each group covered the same content and underwent the same procedures (Barr, Leakey, Ranchoux, 2005, pp. 55-58).

The use of technology was not always relevant in achieving learning outcomes. The students and the tutor in the control group did not need to spend valuable time in class to learn how to use the technology. Progress was made by both groups, but the progress made by the students who did not use technology was significantly greater than by the students using it (Barr, Leakey, Ranchoux, 2005, p. 72).

In spite of constant scientific and technical progress and the implementation of information and communication technologies (ICT) into the teaching process this experiment shows that the use of ICT has a positive effect but was not necessary concerning the improvement of oral skills (conversation, communication) in English language teaching. Whereas the students in the experimental group worked with the technology, the comparison group used this time successfully in practising oral skills. In conclusion we can say that information and communication technology was necessary only in e-mail communication.

In 2006 in San Francisco, Ilona Vandergriff wrote an article: *„Negotiating common ground in computer-mediated versus face-to-face discussions“* , which presents research comparing learner use of reception strategies in traditional face-to-face and in computer-mediated communication. Reception strategies, such as reprises, hypothesis testing and forward inferencing provide evidence of comprehension and serve to establish common ground among participants. A number of factors are hypothesized to affect the use of such strategies. In the data analysis they identify specific types of reception strategies, compare their relative frequencies by communication medium, by task and by learner and describe how these reception strategies function in the discussions (Vandergriff, 2006, p. 110).

The listeners in face-to-face and message recipients in computer-mediated communication play an active role in building common ground by collaborating with speakers/message senders. Learners can help each other reach higher levels of performance than they would if they worked in isolation, those who are at a higher level help those that are less proficient. A study from 1994 by Chun found that students performed a wider range of speech acts, including negotiation, in their online communication than in the conventional teacher-centered classroom (Vandergriff, 2006, pp. 111- 112).

Four reception strategies (global reprise, specific reprise, hypothesis testing and forward inferencing) were identified in the two data sets (computer-mediated and face-to-face), comprising small group discussions on two similar tasks (Task 1 and Task 2). 18 students of advanced German participated in this study. 10 men and 8 women were enrolled in one of two advanced German courses. Two team-building tasks were chosen to ensure that students interacted with each other. Each group completed one of the tasks in the face-to-face setting and the other in the electronic classroom on two consecutive class days (Vandergriff, 2006, p. 116).

Before coming to class, participants were given a handout with one of the two short moral dilemma texts. They were asked to prepare their own personal response, the response involved a personal evaluation of the characters in the text. Groups of three students worked together under a 30 minute time limit, discussing their positions either face-to-face or in the chatroom. After completing both tasks, students were asked about their perceptions of the two group discussions in a questionnaire (Vandergriff, 2006, p. 118).

The analysis identifies various types of reception strategies in both sets of data, compares the type of frequencies across media (computer-mediated and face-to-face), by task (Task 1 and Task 2) and by individual speaker. The reception strategies occur at similar rates in both environments, at a rate of 7.2% in computer-mediated and 5.7% in face-to-face. The data clearly show that computer-mediated and face-to-face communication is very similar with respect to fostering the use of reception strategies. The users of computer-mediated communication do not seem to have any more or less difficulty negotiating common ground with their interlocutors than listeners in face-to-face communication. The findings support previous studies of computer-mediated communication which found this technique effective with respect to fostering negotiation among learners. However, the contrastive approach

also demonstrates that the online environment does not necessarily foster the use of communication strategies any more than the conventional classroom (Vandergriff, 2006, pp. 118-120).

To sum up, there is no significant difference between the frequency rates of reception strategies across media. Analyzing the data by task demonstrated that learners used reception strategies at a slightly higher rate in their discussion on Task 1. The results demonstrate that learners are just as likely in computer-mediated as in face-to-face communication to build and advance common ground and will use the reception strategies under consideration at similar rates of frequency (Vandergriff, 2006, p. 130).

Another study "*Proposing an ESL recommender teaching and learning system*" was written in 2008 by Hsu from Taiwan. An ESL recommender teaching and learning system provides practical information on problems and questions of grammar that students have. This system helps teachers to identify students' specific difficulties and weaknesses in learning. It also provides data of recommendation that helps the student to find out his or her weak points in learning and offers improvement recommendations. Teachers can easily find out the number of students who have failed their exams but they have trouble identifying their real difficulties in learning. This system works to identify and find these problems and then comes up with its suggestions for designing new teaching strategies. The information can also be helpful for the students themselves to improve their grammar. This system is based on the process of "*assessment-education-reassessment*". Its role is to analyse the result of a grammar test and to make suggestions for improved ability in areas where the student is weak (Hsu, 2007, p. 2102-2103).

The test in the experiment is a GEPT (General English Proficiency Test) elementary-level simulation test. It is equivalent to level A2 in the Common European Framework of Reference. Each test contains a total of 65 questions on 20 different areas of grammar. 50 students of low English proficiency have failed an elementary grammar test given by the system. 25 students are the experimental group (taught according to the recommender plan) and 25 the control group (taught in normal ways). After 3 months of teaching, the same 50 students take another elementary-level grammar test (post-test). The test results show that the experimental group students have a high level of improvement, they had an average score of 104 on the first test but an average score of 124 on the second test. There was an increase of 20. The

control group students had an average score of 111 on both tests, there was no progress (Hsu, 2007, p. 2108).

The purpose of the next study (Lu, Wu, Martin, Shah, 2009) entitled "*The effects of computer-assisted language learning (CALL) in grammar classrooms*" was to compare the differences between computer-assisted language learning (CALL) and traditional classroom-based learning in grammar classrooms. Two groups went through pre-test, grammar lesson, post-test. At the end of the experiment an interview was used. Findings suggest that the computer-assisted language learning (CALL) group performed better in the post-test, has better future learning capabilities, had more interactions with other students, generated more questions in class, enjoyed the grammar instruction more (Lu, Wu et al., 2009, p. 2217).

From these two experiments it can be observed that teaching with the help of created programmes in the field of grammar is useful because the knowledge of the experimental group improved significantly in comparison with the control group. It must be emphasized that the programme in the first experiment is useful also for the teacher as it identifies the students' problems and in this way it offers recommendations for his (teacher) further development.

Speaking has played an increasingly important role in second/foreign language settings. The New Horizon College English e-learning system has been developed for online EFL courses where students can engage in self-study activities. It can also be incorporated into a traditional classroom setting to assist EFL instruction and learning. Lin Shen and Jitpanat Suwanthep from Thailand (2011) carried out an experiment on: "*E-learning constructive role plays for EFL learners in China's Tertiary Education*". It aims at investigating the implementation of constructive role plays via New Horizon College English e-learning and its effect on Chinese EFL learners' speaking in college English classes. Oral pre-tests and post-tests, student role play recording analysis, student questionnaires and student interviews were used to collect data during the 18-week instruction period (Shen, 2011, pp. 1-2).

Constructivism is a psychological theory of knowledge which argues that humans construct knowledge from their experience. With the development of computer technology, the constructivist view of language learning and teaching is applied and incorporated as one major theoretical framework for CALL pedagogies and development. CALL is closely related to many aspects of

second/foreign language learning and teaching. It is administered not only as a teaching method but also as an effective tool to help teachers in language teaching and to promote learners' interactive learning. CALL provides self-learning and learner-centered consciousness for both learners and teachers, which can motivate learners to practice more by actively constructing new knowledge instead of passively accepting what teachers teach. Constructive role play can help students become more interested in classroom learning by addressing problems and exploring alternatives and creative solutions (Shen, 2011, pp. 3-4).

260 second-year non-English major undergraduate students were classified into three groups in terms of language proficiency level – high, medium and low. They were randomly assigned into an experimental group of 130 students and a control group of 130 students. All 260 students learnt 8 units of the New Horizon College English textbook for 2 hours each week – 1 hour for the tutorial class and 1 hour for the computer lab class. In the one-hour tutorial class, all the participants in the experimental group and the control group studied the same textbook. After the tutorial class, students began the one-hour computer lab class to perform role plays. The researcher implemented constructive role plays for the experimental group in the one-hour computer lab classes. It allowed the students to practice speaking by interacting with their classmates actively. The control group worked with the existing behavioristic role plays on New Horizon College English e-learning in the one-hour computer lab class. Students came to class, sat in front of the computer and kept reading the speaking materials out from the screen. After the 18-week instruction, students in the experimental and the control group were required to take the speaking post-test (Shen, 2011, pp. 5-7).

The mean scores of the post-test of the two groups (experimental/control) were 10.481 and 8.957. The pre-test and the post-test were nearly the same, it was noticeable that students in the experimental group at all language proficiency levels displayed an improvement in their speaking performance (Shen, 2011, p. 8).

Most of the students expressed positive opinions towards the implementation of e-learning constructive role plays in speaking classes. The teacher becomes a study helper instead of a lecture giver. This technique is helpful in creating an active, interactive and constructive environment for students to practice their second/foreign language speaking. Furthermore students can be actively involved in the whole learning process by gathering

and summarizing speaking knowledge from what they have learnt before and generating new speaking knowledge for their future use (Shen, 2011, pp. 20-21).

The purpose of the experiment *“The effect of the use of L1 in a multimedia tutorial on grammar learning: An error analysis of Taiwanese beginning EFL learners’ English essays”* was to examine whether the computer-assisted instruction tutorial program had an impact on the EFL (English as a foreign language) grammar skills of EFL beginners. A quasi-experimental research design was conducted at a college in southern Taiwan (Chen, 2006, p. 76).

Chen (2006, p. 77), the author of this article from Taiwan (2006), said, “that most Taiwanese students have difficulties in the use of English tenses due to the absence of verb conjugation in Mandarin. “

A post-test was written by both, the control group and the experimental group. It was a post-writing assessment that involved a narrative essay. One hundred written essays were analyzed through error analysis with the following steps: data collection, identification of errors, classification of errors into error types and a statement of error frequency. The results examining whether grammar instruction with the addition of computer-assisted instruction as an instructional support tool can help beginnerlevel Taiwanese EFL students reduce their written grammar error rates (Chen, 2006, p. 76-85).

The goal of this study was to investigate the errors Taiwanese beginner EFL students made in their EFL writings. The researcher developed a multimedia project of grammar instruction with contrastive analysis between Mandarin (L1-their first language) and English to help students learn English grammar. The two groups (experimental and control) were as equivalent as possible, 29% were male and 71% were female (Chen, 2006, pp. 80-82).

Students were involved in traditional classroom instruction referring to lectures without computer aids and instruction with an aid of the computer tutorial. The experiment took four weeks, four hours a week, with a total of 16 hours of instruction for both groups. The participants in the control group were taught in a traditional classroom, whereas the experimental group were instructed in a computer lab with one computer per student. Exercises in the control group were done by paper and pencil, whereas in the experimental group they were done via the computer tutorial with immediate feedback on students’ answers. The students were required to write an essay in class

during one 100-minute period. The minimum page requirement was one page. The finding demonstrates that there was no significant difference in overall error rates between students who received computer-assisted instruction as a supplement to traditional instruction and those who received traditional instruction without the use of a computer (Chen, 2006, pp. 86-87).

“Online and face-to-face peer review: Measures of implementation in ESL writing classes” by Mehrdad Moloudi from Iran (2011) is a study that reviews the theoretical background behind peer review in both face-to-face and online formats. With the arrival of the internet technology, practitioners have presented various techniques to improve efficacy of ESL learning. Online peer review is a modern peer review format which takes place in computer labs and participants can share a copy of their writings with their peers online in a networked computer lab. On the other hand, face-to-face peer review is the conventional type of peer review which takes place in ordinary classrooms and participants discuss their writings face-to-face. This article presents the advantages and disadvantages of online and face-to-face peer reviews (Moloudi, 2011, p. 4).

ESL students are afraid of face-to-face peer review because they do not feel comfortable with their peers mainly due to the lack of confidence in speaking English as their second language. However, when transferred to a computer lab, the students tend to be more motivated and productive in online peer review. The implementation of face-to-face peer review in writing classes is time consuming, so it is essential to apply online peer review format because it does not involve the physical attendance of peers. Both of these formats can be used for increasing autonomous writing and improving writing proficiency (Moloudi, 2011, p. 5).

In the face-to-face peer review format students find their peers’ feedback as a valuable source of information and a supplement to the teacher’s feedback. It improves confidence, helps to develop a sense of community and leads students to consider alternative strategies. Despite the benefits of this peer review, there is the problem with its quality. There are other weaknesses such as time constraints, teachers’ inability to monitor each group simultaneously, unequal participation and difficulties in oral production (Moloudi, 2011, p. 6-7).

On the contrary, online peer review format can save more time in the classes for other activities which can be done outside the classroom. Digital and electronic formats of peer review increase the quality. There are several

studies indicating that the modern digital format is advantageous to its classic conventional format (Moloudi, 2011, p. 7).

According to Suprajitno (1998, p. 7): “peer review via email accelerates the peer review process, gives an opportunity to compare one’s work with another as they are all available on the discussion board and it gives the students the possibility to seek their teacher’s advice and peer’s guidance online simultaneously.”

The author has experimented and studied the effectiveness of face-to-face and online peer review formats in a public university in Malaysia where English is spoken as a second language. Students reviewed their peers writing during one-hour sessions throughout a 14-week semester. The author’s findings revealed that peer review was extremely effective in the improvement of the participants’ writing in English. Both face-to-face and online formats of peer review affected the proficiency of ESL undergraduates’ writing in English. Therefore it is recommended to combine face-to-face and online peer review (Moloudi, 2011, p. 12-13).

In conclusion we can state that most of the presented experiments prove the effectiveness of e-learning research, an increase of students’ knowledge and the teaching process becomes much more attractive for students.

A more significant effect was recorded concerning experiments with the use of created programmes. Teaching with created programmes in the field of grammar is very useful (ESL Recommender, teaching and learning system). It helps teachers to identify students’ difficulties and weaknesses in English grammar and it also gives recommendations. An e-learning system New Horizon College English has also very important effect on developing speaking skills.

We are aware of the fact that the implementation of information and communication technologies (ICT) into teaching is a long-term process. It is not easy. Firstly, new methods and forms of education with the use of ICT must be created. In practice it means a big change not only for teachers but also for students. It is necessary to emphasize that nowadays constant experimentation has become a part of the teaching process. Only through experimentation can we find new methods and ways to improve the present educational process.

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Abstract

Nowadays a scientific and technical progress brings new possibilities for using various technologies. They have become an indispensable part of new methods and ways of research. Their gradual implementation into the research runs in the form of constant experiments with bigger or lower effect. The paper presents several experiments in foreign language teaching with the use of ICT in e-learning environments. The whole process of experimenting runs in order to improve the teaching and to make it more effective.

Key words

experiment, foreign language teaching, Information and Communication Technologies, e-learning environment

Extent: 47 276 characters

EXPERIMENT IN VOCABULARY ACQUISITION AND DEVELOPMENT RESEARCH

Zuzana Fischerová

An experiment is considered by many people as the most appropriate way of resolving a question about language learning or teaching (Brown, Rodgers, 2002, p. 195). Bailey (1998) regards the experimental tradition as the most familiar and historically dominant approach. Though experiments are often found in scientific fields like chemistry and physics, Brown & Rodgers have identified over six hundred experimental reports focused on vocabulary learning techniques that were published over a period of twenty years from 1982 to 2002. The experimental approach is commonly defined as a quantitative method of data collection and analysis. In experimental research the central issues of the research can be posited as research questions and / or research hypotheses. While research questions will try to be answered in the study, hypotheses are claims that might be supported (or disapproved) by the experimental study. Research questions are often developed through suggestions made by other researchers. Another way is through the extensive reading and analysis of existing research. This can lead to the identification of gaps that may appear as important (Mackey, Gass, 2005, p. 18). According to Brown and Rodgers (2002), experimental research should be characterized as:

- systematic: following clear procedural rules for the design of the study, that prevent any threats to the internal validity of the study and facilitate the selection and application of statistical procedures;
- logical: exhibiting logic in the step-by-step progression of the study;
- tangible: collecting data from the real world that must be quantifiable, i.e., each datum must be a number representing a well-defined quantity, rank or category;
- replicable: referring to the ability of reproducing the study under similar conditions and obtaining the same results by an independent researcher;

- reductive: establishing patterns and relationships among individual variables, facts and observable phenomena. Through carrying out experimental research, new patterns in the facts may be discovered, and thus reduce the confusion of facts.

Preparation for research also requires the ability to situate and defend the study in the light of existing knowledge and research. A number of experts in the field of foreign language research (Norris, Ortega, 2006; Brown, Rodgers, 2002; Porte, 2010; Perry, 2011) recommend reviewing primary research studies which enables researchers to compare and combine findings across individual studies and to identify gaps in research methodologies. They point at the necessity to understand the research design, methods of data analysis, and statistical treatments. For the purposes of this article we have conducted searches to uncover experimental studies published during the period from 2007 to 2011 in the following applied linguistics journals: two Oxford University Press journals: *Applied Linguistics* and *ELT Journal*, an international journal *Modern Journal of Applied Linguistics*, international scientific *Journal of Language Teaching and Research*, and an academic journal *Electronic Journal of Foreign Language Teaching*. To obtain a sufficient amount of information on research procedures, we have focused on the articles available in a full-text form. The search yielded twenty-four experimental studies that focused on second language learning and teaching. Further study of these articles revealed that vocabulary acquisition occupies a key position in experimental foreign language research, which fits well with Brown and Rodgers' analysis mentioned above. Thirteen studies dealing with vocabulary acquisition, enhancement, retention, etc. have been identified. These vocabulary studies employ a variety of means to focus on the words targeted for learning, such as: L1 glosses or explanations (Cheng, Good, 2009), on-line and paper dictionaries (Xu, 2010), explicit instruction (Sonbull, Schmitt, 2010), Contrastive analysis and translation (Laufer, Girsai, 2008). Two articles advocate the importance of various aspects of reading on vocabulary enhancement (Vidal, 2011; Rashidi, Piran, 2011). Other factors that might facilitate vocabulary acquisition are various numbers of repetitions of lexical items (Webb, 2007; Chen, Truscott, 2010), pair work (Baleghizadeh, 2010), informative context (Webb, 2008), noticing alliteration in lexical chunks (Lindstromberg, Boers, 2008), using semantic links or networks (Papathanasiou, 2009), and using "word forks" in relation to phrasal verbs

acquisition (Pratheeba, 2011). A few articles have dealt with the enhancement of reading proficiency either through pre-reading activities (Alemi, Ebadi, 2010), strategy instruction (Macaro, Erler, 2008), using original materials (Sabet, Daneshvar, 2010) and three types of glossing (Cheng, Good, 2009). The rest of the studies examined to what extent various instructional approaches and procedures can result in language learning. Examples include a study of how written corrective feedback can contribute to language development (Bitchener, Knoch, 2010), an evaluation of the effectiveness of three types of input-based approaches on the development of pragmatic proficiency (Takimoto, 2007), an investigation of the impact of structured reading lessons on the development of critical thinking skills (Gómez, 2010). Ridder et al. (2007) investigate how the task based approach stimulates the process of automatization. Grammar pedagogy is tackled by a study (Abdolmanafi, Branch, 2011) examining the effects of focusing on form on the learning of relative clauses. Van Gelderen et al. (2010) attempted to demonstrate to what degree increasing students' fluency in the written production of foreign language words and word combinations results in the use of these elements in writing and in better text quality. Finally, Robinson et al. (2009) measured the effects of increasing the complexity of task demands on L2 speech production.

Except for research that only wants to identify and describe phenomena, all other research is looking at relationships between phenomena. A synonym commonly used for a simple relationship is correlation.

Correlational research measures the strength of a relationship between two or more variables by calculating a statistic called a correlation coefficient. However, "statistical significance does not imply meaningfulness; and correlational coefficients do not indicate causality" (Brown, Rodgers, 2002, p. 288). Experimental research should aim at providing strong evidence for cause-and-effect relationships between two phenomena. Many researchers argue for causation as the main criterion for evaluating the effectiveness of research (Johnson, 1992, p. 165, in Hinkel, 2005). The precise information about relationship and causality in experimental research is provided by the use of statistical procedures. As Brown and Rodgers (2002, p. 204) point out, formal experiments are almost always analyzed using inferential statistics that allow the experimenters to make inferences with respect to the research questions.

In order to carry out any sort of measurement, researchers need to think about variables. According to Mackey and Gass' definition, variables are "characteristics that vary from person to person, text to text, or object to object" (2005, p. 101). By manipulating at least one (independent) variable a researcher tries to demonstrate a possible change in another variable, called the dependent variable. This manipulation is referred to as a treatment or intervention (Locke et al. 2009, p. 90). In the domain of foreign language (L2) pedagogy independent variables often comprise teaching methods, types of assignments, types of teaching materials such as text books and visual aids, types of rewards, types of questions used by the teacher, evaluation techniques, etc. As for the dependent variables, researchers often examine the impact of the independent variables on achievement, motivation, attention, interest in learning, participation and attitudes. When conducting research, variables that interfere with the findings might appear. Mackay and Gass (2005) define such variables related to experimental approaches as follows:

- moderator variables – referring to characteristics of individuals or treatment variables that may result in an interaction between an independent variable and other variables. A moderator variable is a type of an independent variable that is not the main focus of the study, but may modify the relationship between the independent variable and the dependent variable.
- intervening variables – are variables which interfere with the actual results. Though being similar to moderator variables, the intervening variables are not included in an original study either because the researcher has no account for their effect or because there is not a possibility to identify them in a precise way.

Researchers need to identify these possible factors and control them in some way. Norris and Ortega (2000) suggest investigating the effects of moderator variables such as learner factors, learning styles, linguistic factors, cognitive factors, and pedagogical factors. A researcher should make sure that it is the treatment that has caused the observed effect, rather than some other, uncontrolled variable.

In order to understand how variables are supposed to relate to one another, their proposed functions must be correctly assigned. As Porte emphasizes, "A sound grasp of the functions of variables in quantitative research is particularly important to help us appraise how far appropriate

statistical procedures have been carried out on data” (Porte, 2010, p.14). In Nunan’s (1992) classification, variables can be classified according to the type of scale on which they are measured. He distinguishes:

- nominal scale which measures mutually exclusive characteristics (such as sex and eye colour) which allow researchers to categorize variables into two or more groups;
- ordinal scale referring to those variables which can be given a ranking such as first, second, third, but in which the actual core itself is not given;
- interval scale providing information on the ranking scores (as does the ordinal scale) and also indicates the distance between the scores;
- ratio scale which does not need to be dealt with as this scale is of little interest in applied linguistics.

The variables present in foreign language research are often too difficult to be measured directly. Therefore, researchers provide working definitions of variables referred to as operationalizations which allow researchers to measure the variables (Mackey, Gass, 2005).

We will look in greater detail at reliability, validity and generalizability which are considered the most important standards in judging the soundness of the research. Reliability refers to the consistency and replicability of the results obtained from the research. We distinguish internal reliability, which is consistency of data collection, analysis, and interpretation and external reliability referring to the extent to which independent researchers can reproduce a study and obtain results similar to those obtained in the original study (Nunan, 1992, pp. 12-17). Attention must be paid also to instrument reliability referring to consistency of a particular research instrument (Mackey, Gass, 2005, p. 129). Validity is the term which refers to how correct or accurate the conclusions of a scientific study are (Maxwell, Delaney, 2004). There are many types of validity, including content, face construct, criterion-related, and predictive validity. The most common area of concern is internal and external validity (Mackey, Gass, 2005, p. 107). Within experimental research, internal validity deals with the interpretability of research. It is concerned with the question: Can any differences which are found actually be ascribed to the treatments under examination? The researcher has to think through a research design carefully to eliminate or at least minimize threats to internal validity. External validity is concerned with the generalizability of the research findings. It is the extent to which results of the research are

relevant not only to the research population, but also to the wider population of language learners. Inferential statistics enables the researcher to determine the likely generalisations about a population from data derived from a sample (Brown, Rodgers, 2002). Without internal validity it does not make sense to try to generalize the findings to a larger population, thus internal validity is a prerequisite for external validity. Validity and reliability are described by Locke et al. as elusive qualities, and very few designs can resolve all possible threats to the consistency of all the research procedures. Therefore, the researchers should be aware of such issues and report what they have done to control the problems (Locke et al., 2009, p. 85). The factors that can affect the results of a study and thus lower the internal and external validity have been identified by a number of authors as e.g. Gall et al. (1999) and Perry (2011). We have listed the validity threats that are commonly considered as potential threats to the internal and external validity of a research study as follows: history, maturation, testing, instrumentation, selection bias, experimental mortality, reactive effects of testing, Hawthorne effect, multiple treatment interference, novelty effect, intervening variables such as boredom and anxiety etc. It is not possible to foresee all potential threats before the experiment is conducted, however, careful researchers need to anticipate all threats and account for them in the research design.

Construct validity also needs to be discussed within the field of foreign language teaching research. A construct is a psychological quality, such as proficiency, intelligence, motivation, that cannot be directly observed but can be assumed to exist. Construct validity refers to the degree to which the research adequately captures the construct of interest. As foreign language research deals with variables such as language proficiency, aptitude, exposure to input, and linguistic representations, many of the variables investigated are not easily or directly defined. It is important to define the constructs that are investigated in a way which makes them accessible to the outside observer (Mackey, Gass, 2005, pp. 107-108). In order to ensure that the researcher is really eliciting what he/she wants to elicit, all materials need to be pilot-tested. Mackey and Gass also mention content validity referring to the representativeness of the measurement regarding the aspect about which we want information. In case the acquisition of relative clauses is the focus of the research, it is inevitable to make sure that all relative clause types are included. There is also a face validity which is concerned with how a measure or procedure appears using common-sense criteria. The face validity

refers to the familiarity of the research instrument and hinges on the participants' perceptions of the research treatments and tests. A classic use for face validity is in the construction of a test. A researcher devises a test, and then asks for review from peers to determine whether or not the test is ethical, and whether or not the test will actually measure what the creator thinks it will measure. In order to ensure that the researcher is really eliciting what he/she wants to elicit, all materials need to be pilot-tested. By means of pilot-testing researchers make certain that the materials will allow the research questions that have been posed to be answered.

Validity of the study can be enhanced through random selection of the subjects. The group of people which is studied is called a population. In educational research it is impossible to study every member of a population; instead a representative sample of a population is studied. The selection of an appropriate sample is one of the most important concerns in experimental studies (Bialystock, Swain, 1978). Representativeness of the sample enables researchers to generalize the findings in terms of the population as a whole. It is generally believed that larger samples equal a higher likelihood of differences between the sample and the population. However, researchers in L2 acquisition rarely have access to larger pools of participants. In order to guarantee representativeness of a sample, it must be ensured that each individual has the same chance of being selected for a study as any other individual. This can be accomplished via random sampling. Then, it is possible to argue that any differences on the final scores are due to the experimental treatment as it can be assumed that other variables which might have an effect exist in equal quantities in both control and experimental groups. Randomization is usually viewed as one of the hallmarks of experimental research. Students might be randomly assigned to either control or experimental groups. Both groups of students should be tested before the experiment to make sure that the groups are really the same. Randomization greatly increases generalizability of the results by ensuring that groups represent the population.

In the foreign language teaching context, only very little research can be based on random samples from a population as it is not always possible to rearrange students into different groups or classes at will. Spada (2005) has raised the issue about the ecological validity of research carried out in classrooms versus laboratories. Some researchers recommend investigating L2 learning and teaching issues mostly under controlled, laboratory

conditions. Doughty and Long (2005, p. 264) argue, that such a proposal might challenge the issue of ecological validity, as L2 instruction is usually carried out in classrooms. Real experimental research with random selection of participants is often difficult to conduct for obvious logistical and ethical reasons, particularly in research with children or adults in educational contexts. In order to carry out an experiment at all, the researcher has to carry out the experiment with already existing intact groups of subjects. These subjects have been grouped together for reasons other than the carrying out of an experiment. If intact classes are used, it is suggested to consider carefully how the classes are assigned to treatment groups. It is recommended using a semi-randomization procedure by arbitrarily assigning classes to one treatment or another.

The experiment can be conducted in different ways depending on the nature of the subjects and the instruments, and the way the data are collected and analyzed. The structure of a research study which provides direction and systemizes research is called the design. "The greater the control over the variables that might influence the outcome of the study the stronger the design" (Bailey, 1998, p. 78). In Mackay and Gass' classification, experiment design types can range from truly experimental, with random assignment, to quasi-experimental, without random assignment. A true experimental design usually involves some form of comparison between groups. There are two ways how the comparison is carried out. In a comparison group design participants are randomly assigned to one of the groups with different treatment (independent variable). The design involves a pre-test and a post-test to ensure that the results of the two groups can be compared. If the research question is complex, more treatment groups can be added to the study. The second type of experimental design is referred to as control group design. This is similar to the comparison group design; however, the control group will not receive the treatment in between tests. Though in many experimental studies participant are given a pre-test to ensure comparability of the participant groups prior to their treatment, in some cases it would be undesirable to give a pre-test as the pre-test might help participants to guess the purposes of the treatment. The experiment comprising the post-test-only design usually focuses on performance and not development. Repeated measures design is a way how to deal with the problem of lack of randomization through eliciting multiple measurements from each participant. It means that different individuals are given all tasks or

all treatments in different orders. In some ways this is similar to the counterbalanced design. Counterbalancing refers to experimental design in which the ordering of test items or tasks is different for different participants. In case the participants are not assigned randomly and there is no pre-test, counterbalancing is possible compensation for the lack of comparability by having all participants do all tasks in a different order.

A design allowing researchers to consider more than one independent variable (generally moderator variable) is called factorial design. This design, examining the effect of multiple variables on a dependent variable, can occur with or without randomization. When small groups of learners are involved in the research, time series designs are frequently used. In this design, repeated observations (pre-tests and post-tests) are carried out over a period of time to establish an initial baseline and after treatment to measure effects of the treatment. Time-series design facilitates to reduce problems of a second language research that has no control group.

Other experimental designs include one-shot design using no treatment. This type of design is used when the study has no pre-test / post-test but simply raises questions on learner knowledge or behaviour at one particular time. Similarly, in one-shot case study design, only one (experimental) group is exposed to the treatment, but a post-test is given to observe or measure the effect of the treatment. There is no control group involved in this design. After the treatment the experimental group is tested only once for the purpose of measuring the degree of change on the dependent variable. One-shot case studies are considered to be in the pre-experimental class of research designs. The lack of control over variables prohibits researchers from making strong causal claims. As for the utilization of varied experimental designs in the examined studies, we have classified 10 studies as true experiments using the random assignment of subjects, and 9 studies were using quasi-experimental designs. 4 studies employed one group or the pre-experimental design and only one study utilized the repeated measures design.

The second part of the paper will focus on experimental research which involves various strategies promoting the students' lexical development. As reflected earlier, vocabulary acquisition, organization and development occupies a dominant position in experimental FL teaching and learning research. It is no surprise as vocabulary is often considered as essential for successful communication in any language. Though grammatical structure of

a text might be crucial to understanding the meaning, it could be argued that understanding the meaning of words is even more important. "Knowing words is the key to understanding and being understood" (Vermeer, 1992, p. 147). Out of 24 studies surveyed 13 were concerned with the issue of the most effective means to promote acquisition, enhancement and retention of learners' vocabulary. Through discussing 13 experimental studies we will attempt to outline current practices employed in vocabulary experimental research, point to the challenges as well as detect links between the studies.

The question whether dictionaries should be used in the foreign language classroom, and what dictionaries is examined in the empirical study of Xu (2010). The researcher wanted to compare the effect of using glosses versus the use of dictionaries on the incidental vocabulary acquisition (IVA) in reading material. The second goal was to investigate whether there would be a difference in the immediate word gains and retentions of learners with regard to the paper dictionary and the electronic dictionary. The participants of the research were 60 freshmen who had been learning English as a second language in Qingdao University of Science and Technology in China. The students were divided into two groups according to their score of English in the college entrance examination. In the first group students were provided with glosses during reading comprehension activity. The second group was further divided into two parts evenly. Students in Part 1 used the paper dictionaries and students in Part 2 used the electronic dictionaries while doing reading comprehension tasks. A reading material selected from the students' training book contained 10 unknown words. With regard to validity of the study, three steps were taken to ensure that the target words were unfamiliar to participants. After the teacher selected 13 words, a pilot study was conducted to further identify the unknown words. Finally, a word that was easy to be guessed out by the stem and affix was removed. Students were allowed 15 minutes to do the reading comprehension without knowing the task of target word test. After the reading materials were collected, participants were tested on their knowledge of the target words. In five days time there was an unexpected delayed target words test. In both tests students were allowed 5 minutes to finish the tests. The results showed that students of the second group (using dictionaries) got a higher mean score than students of the first group (which were not using of dictionaries). This indicated that dictionary use had a positive effect on both IVA in immediate gain of new words and in the retention of new words. Comparison between

Part 1 and Part 2 of the second group showed that there was no significant distinction between using the different kind of dictionaries. However, the retention rate of Part 1 was much higher than Part 2. It can be concluded that when students use electronic dictionaries, they only concentrate their attention on finding meaning to help them comprehend the text. Though electronic dictionaries appear to be more convenient, the paper dictionaries provide large amount of vocabulary information (such as phrases, model sentences, different parts of words, etc). This allows students to do more search and evaluation and facilitates building good study habits. The study confirmed that consulting a dictionary has a positive impact on vocabulary learning and reading development, and thus a consistent and appropriate manner of dictionary use should be encouraged. In vocabulary experiments, the selection of reading materials and target words play an important role. In this respect, the number of ten target words appears to be a limitation to the validity of the study.

L2 incidental vocabulary learning has been the focus of two studies by Webb. In the 2007 study the researcher focused on the effects of repetition (1, 3, 7, and 10 encounters) on word knowledge. As Webb claims “the majority of past research has equated gains in knowledge of meaning with acquisition. Other aspects of knowledge which may also be acquired such as syntax, grammatical functions, association, and orthographical knowledge have largely been ignored” (Webb, 2007, p. 46). Therefore, Webb attempted to measure more aspects of vocabulary knowledge. He examined how repetition affects knowledge of orthography, syntax, association, grammatical functions, and meaning and form with regard to receptive and productive knowledge. The independent variable was the number of times the participants encountered target words (incidental vocabulary learning from 1, 3, 7, and 10 repetitions). The participants were 121 second-year students from Kyushu University in Japan learning English as a foreign language. All of the participants had studied English for a minimum of seven years, and underwent the test showing that they had mastered receptive knowledge of almost all of the 2000 most frequent words. They were randomly assigned to four experimental groups and one control group. Each experimental group completed a vocabulary comprehension task involving reading a set number of pages with various numbers of occurrences of 10 target words for each group. Ten nonsense words were created and replaced the target words in the contexts. In pilot studies participants reported that

they believed the nonsense words to be authentic English words. The control group did not complete any of the learning tasks and never saw any of the target words. After the treatment a surprise test measuring different aspects of vocabulary knowledge was administered. The obtained data were analysed and confirmed that repetition does play a significant role in gaining vocabulary knowledge. In the study, the stringent control over construct validity has been emphasized. Replacing the forms of the target words with nonsense words may provide more accurate results by eliminating one factor – participants having prior knowledge of target words – which may have influenced the results. Using nonsense words can be beneficial as whatever gains can be attributed entirely to the treatment. However, as replaced forms are not authentic it cannot be certain if they behave in the same way as real words. As the learning task was rather removed from actual second language learning through reading, the ecological validity of the results might be questioned.

In the following study Webb (2008) attempted to gain further insights into the effects of context on incidental vocabulary learning. The study used short contexts each containing a single target word. The contexts were rated on the information that could be used to infer the meaning of the target words and categorized into more and less informative contexts. The participants were 50 Japanese second year students at university in Fukuoka. They were randomly assigned to two groups: experimental and comparison. The experiment was carried out within one 90-minute class period. The research design included four dependent measures (recall of form, recognition of form, recall of meaning, and recognition of meaning). The independent variable was the type of learning task (incidental vocabulary learning from three informative sentences and three less informative sentences). Ten target words were not real words but their disguised forms to ensure that participants had no prior knowledge of the target items. The number of target words was determined during pilot studies. Each sentence in the treatments was rated on the amount of information it provided about a target word's meaning. After the treatment, four tests were administered measuring recall of form, recognition of form, recall of meaning, and recognition of meaning. The participants who met the target words in the more informative sentences had higher scores on all four measures. However, the difference in scores was the most significant on the tests measuring recall of meaning and recognition of meaning. As for the tests

measuring recall of form, and recognition of form, the differences were not statistically significant. It has been concluded that language teachers and course books designers need to consider the contexts in which the words that may be unknown are presented. In order to help increase vocabulary learning, lexical items should never be presented in misleading contexts. The study has also pointed at the importance of a clear definition of context in research. Since there are many different types of contexts researchers need to take into consideration the effects of the context, particularly when designing their own experiments or comparing the results from different studies.

Another contribution to our understanding of the effects of repetition on incidental vocabulary acquisition was carried out by Chen and Truscott (2010). The researchers based their study on Webb's design. In opposition to Webb, they emphasized ecological validity over control and presented real words in meaningful reading passages. Besides studying incidental vocabulary acquisition through reading involving repeated encounters with target words, they also investigated the effect of L1 lexicalization on the acquisition of meaning. They further examined the role of repetition in relation to the lexicalization variable and tested the effects of lexicalization after a delayed period of two weeks. The participants of the research consisted of 72 first year students majoring in English at two Asian universities. They were intermediate-level learners with at least six years of English instruction. Just like the participants in Webb's study, the Vocabulary Levels Test was used before the experiment to ensure homogeneity of the learners' language proficiency. Participants were randomly divided into three groups, based on the number of target-word exposures (E1, E3, E7) in the texts. The researchers pilot-tested the vocabulary items selected for focus on a separate group of nine learners comparable with the participants in the main study. The goals were to make sure that the words would be unfamiliar to a group of learners similar to those in the experiment and to test whether all participants could understand the texts. At the same time the pilot-testing allowed the researchers to determine the amount of time to be allotted to the reading task, and to ensure the feasibility of the measurements. If the participants in the actual study would have been asked to test their knowledge of the words it could serve as an impulse for learning. Target words were 10 English words selected from a checklist containing 100 potential targets. They were evenly categorized into words that are

lexicalized (L) in participants' native language (L1) and non-lexicalized (NL) words having no Chinese translation that is a fixed expression. The target words were presented within L2 reading passages. The disadvantage was that the words were uncommon, especially those not lexicalized in Chinese. The experiment included three phases – a reading comprehension task, an immediate post-test, and a delayed post-test two weeks later. The results of the immediate post-test showed that repetition affected productive knowledge more than receptive, which is consistent with Webb's (2007) findings. In the delayed test this relation was reversed. L1 lexicalization appeared to be a great difficulty for non-lexicalized words. Contrary to Webb who imposed stringent control in his experiment, Chen & Truscot favoured authenticity and ecological validity. However, this approach meant looser control and therefore limited the ability to determine causal relations. Another disadvantage was the lack of control over the characteristics of the individual target words and the contexts.

Reading and listening are regarded as sources of vocabulary acquisition for L2 learners. The essential role of these two skills is obvious particularly in the development of high-proficiency learners at tertiary level. Two articles have examined the effects of reading on vocabulary acquisition. The contribution of academic reading and listening to the development of lexical representations was investigated by Vidal (2011). The aim was also to address the differences underlying both processes. The study involved 248 first-year ESP undergraduates at the university in Madrid. They were exposed to three different teaching conditions. They either (a) read three academic texts, (b) watched three lectures, or (c) received no input at all and just completed the vocabulary measures. The vocabulary gains were studied with regard to the four variables: type of word, frequency of word occurrence, type of word elaboration, and predictability from word form and parts. The subjects were tested in intact classes. Each class was assigned to one of the experimental conditions. There were 36 target words used in the study – 12 in each lecture / reading. The vocabulary test comprised also 18 *nonwords* formed by changing some letters in real words or words with English-like spelling. The purpose of using *nonwords* was to control students' overestimating their vocabulary knowledge. The target words were classified as technical, academic, and low frequency. As for the frequency of word occurrence, repetitions were kept constant across the conditions. The elaborations that accompanied the target words were classified as explicit and implicit. All the

subjects were tested on their prior knowledge of the target words before the treatment. Their level of knowledge was measured with a modified version of the Vocabulary Knowledge Scale having been pilot tested by the researcher in the previous study. Within a 4-week time and on different days, the subjects were presented with a series of either three lectures or three readings. After the treatment the participants completed a cloze test and answered true-false comprehension questions. The comprehension was measured through three sets of 10-item true-false questions and three sets of 20-item cloze tests. Afterwards they were tested on their knowledge of the target words introduced in the given text. There was a delayed testing a month later. The control group completed the different vocabulary tests. The findings showed that academic reading is a more efficient source of acquisition particularly for low-proficiency students. As the proficiency increases, the difference gains between listening and reading decreases. In delayed post-tests, the scores were higher in academic reading, though no significant difference was found between reading and listening among the highest proficiency learners. With regard to four variables analyzed in the experiment, it was suggested that the variables made an important contribution to the encoding of new lexical items. L2 listeners mainly paid attention to those words that were similar to words in their L1 and to those they perceived as relevant to the main purpose of the lecture. Readers also made higher achievements in words similar to L1 words; however, it was repetition in the text that seemed to be an advantage contributing to vocabulary gains. For listeners the repetition was not as effective. The listeners focused more on technical words, whereas the readers also paid attention to low-frequency items. As for elaboration, in both groups explicit elaborations were found to facilitate the acquisition process. The experiment involved a rather high number of participants, which increased the generalizability of the findings.

In their article Rashidi and Piran (2011) presented research on the effect of extensive and intensive reading on learners' vocabulary size and depth. 120 Iranian adult female students attending a 40-session English programme at Omid Language Centre were recruited for the purpose of the study on a voluntary basis and enrolment. Quick Placement Test was used to assign the participants to intermediate and advanced level. In both groups half of the students received intensive Reading treatment (IR) treatment and the rest received Extensive Reading treatment (ER) treatment. At the beginning of the course, all the participants were pre-tested to check their vocabulary

knowledge in terms of size and depth. Two types of vocabulary test were administered: Schmidt's Vocabulary Levels Test and Read's Word Associates Test. After the treatment the same tests were run as the post-tests in all four groups to see if there was a change and development in the vocabulary of the participants. The researchers' aim was to see if IR and ER make significant difference between learners' performances in terms of vocabulary size and depth. The second goal was to determine if the IR and ER had affected the learners' performance differently at intermediate and advanced levels. Another goal was to observe what the pattern of change and development in the learners' performance was concerning vocabulary size and depth. According to the results, all the four groups benefited from both IR and ER treatment. As for vocabulary size, the intermediate group receiving IR and advanced ER group outperformed the ER intermediate and IR advanced groups. Considering the vocabulary depth, all the four groups benefited from both approaches, nevertheless, no differences in learners' performance with regard to proficiency level had been noticed. The researchers summarized the overall findings of their experiment as follows: reading techniques either intensive or extensive are effective and efficient ways of improving foreign language learners. Teachers should use some practical ways to encourage students to read either extensively or intensively. As the selection of participants was provided on a volunteer basis, the validity of the experiment may have been threatened by selection bias. It can be assumed, that verbally gifted persons, may be more likely to volunteer as participants in research than verbally challenged persons, which can prevent the authors drawing valid conclusions from the research. The advantage of the experiment is that it exposed the learners to input over a long period of time.

Sonbul and Schmitt (2010) evaluated the effectiveness of the direct teaching of new vocabulary items in reading passages. They compared incidental vocabulary learning from a reading only approach (Read-Only) and an approach combining incidental learning from reading plus explicit instruction (Read-Plus). The vocabulary knowledge was tested with regard to the form-meaning link at three different levels: meaning recognition, meaning recall and form recall. There were 40 first-year female university students of Medicine in Saudi Arabia participating in the study. The reading passage – a seventy-word extract – was selected from the students' ESP reading course book. The text contained 20 targeted low-frequency words which occurred only once in the passage. Those were divided between Read-

Only and Read-Plus conditions. Testing consisted of three tests developed to measure the target items. A fill-in-the-blanks test was used to assess form recall, L1 translation assessed meaning recall and a multiple-choice test measured meaning recognition. Prior knowledge of target items was pre-tested one week before the teaching session. The 20 target items were intermixed with 40 high-frequency words. The participants were not informed about any upcoming tests in order to prevent any intentional learning. The experiment started with the distribution of copies of the passage to learners who were told to read it silently in ten minutes. Comprehension of the words under Read-Only condition was assessed with general and specific questions. The words under Read-Plus condition were directly explained. The teacher provided two meanings for each target item, wrote them on the board, and repeated them once. Words under the Read-Only condition were deliberately ignored in terms of explicit instruction. The teaching session was followed by three immediate post-tests examining form recall, meaning recall and meaning recognition. One week later, the same three tests were administered unexpectedly. The findings showed that uninstructed incidental learning could result in modest lexical gains. Direct instruction appeared to lead to greater learning. The researchers concluded that the widespread teaching practice of direct vocabulary instruction is not a waste of time and could contribute to building L2 vocabulary. The researchers also tested how the two instructional approaches affected the three levels of form-meaning mastery. The results confirmed that receptive knowledge was easier to acquire than the productive knowledge. The results also highlighted the importance of repetition and word form when teaching new words.

Another way how to support L2 vocabulary development is to provide attention that contrasts an L2 lexical item with an L1 lexical item. The benefits of drawing attention to the similarities and differences between L2 and L1 contribution to vocabulary enhancement has been examined by 3 experiments. The main goal of the experiment carried out by Laufer and Girsai (2008) was to investigate whether incorporating contrastive analysis and translation activities into a text-based communicative lesson would make a significant difference in acquiring new vocabulary by comparison with a reading comprehension task alone, and by comparison with other form-focused activities following the reading task. The researchers, who tried to make a case for explicit contrastive analysis and translation activities as a strategy in vocabulary teaching, hypothesized that vocabulary acquisition

would benefit from cross-linguistic form-focused instruction involving comparison with L1 and translation. As mentioned earlier word knowledge consists of various components such as knowledge of the word's pronunciation, spelling, morphology, syntax, meaning, lexical relations, etc. The researchers considered the ability to retrieve the meaning of a given word form, and the ability to retrieve the word form of a given concept as the most important component of word knowledge. Therefore, the construct of acquisition was operationalized as the ability to provide the form of the target words in response to their L1 translation equivalents (active recall), and the ability to provide the meaning of the target words (passive recall). The target vocabulary was selected after pre-testing all the participants and included 10 single words and 10 collocations. The pre-test consisted of 50 single words and 41 collocations comprising target items as well as vocabulary which were supposed to be familiar to the learners. The researchers were teaching the same vocabulary to three groups using three different types of instruction – meaning focused instruction (MFI), non-contrastive form-focused instruction (FFI), and contrastive analysis and translation (CAT). The participants were 75 Hebrew native speakers aged 15-16 studying in three parallel intact classes and were comparable in terms of proficiency in English. Each class was randomly assigned to one of the three above mentioned types of instruction. As the study attempted to examine incidental vocabulary gains, the learners were not informed they were participating in an experiment. Each step of the study was conducted during regular class time and took the same amount of time in the three parallel classes. After the treatment all the subjects were unexpectedly tested on the target vocabulary. First, they were tested on active recall (their ability to provide the English equivalents of L1 lexical items). The second test given after the delay, presented the target words in a different order. The learners were supposed to provide their meaning in L1 or explain in English. Delayed tests were administered a week later in the same manner. Descriptive statistics showed that the lowest scores were received in the MFI group and the highest in the CAT group. Inferential statistics were used to compare the three types of instruction as follows: in the case of the single words–passive recall, single words–active recall, collocations–passive recall, and collocations–active recall. While the differences on the immediate tests between all pairs of conditions were significant, the comparison of the delayed tests showed the only non-significant difference between FFI and

MFI in the passive recall of collocations. This outcome could be contributed to the fact that it was a relatively easy test as most collocations were semantically transparent. However even here, the CAT condition yielded a significantly higher score than the other two conditions. It was concluded that both contrastive analysis and error analysis remained vital components of language teaching. The findings suggest that contrastive form-focused instruction in a communicative classroom environment can contribute to learners' L2 vocabulary development.

The study of Cheng and Good (2009) investigated whether providing L1 glosses in or near a reading text could assist technical university students at different English proficiency levels to read texts, acquire new vocabulary, and retain words over time. The participants were 135 undergraduate business and engineering students from four English proficiency levels studying at a university of science and technology in Taiwan. Initial language proficiency was assessed using an internationally recognized standardized language test. Subjects in each class were randomly assigned to four groups - three experimental groups and one control group. The research design included a pre-test, immediate test, and two delayed tests. The researchers employed three specific combinations of vocabulary glosses: L1 (Chinese) glosses plus L2 (English) example sentences presented prior to the text on a separate page, L1 in-text glosses presented next to the target words inside the text and L1 marginal glosses presented below the text. Those three types of gloss conditions were compared with no-gloss condition. Each participant was given a reading text with or without gloss supports. Each of the two texts had 16 vocabulary items that were targeted for glossing. Besides comparing the effects of each of the individual gloss conditions on the subjects' performance on reading comprehension and vocabulary recall tests with a no-gloss control group, the influence of possible language proficiency in the effectiveness of gloss conditions was examined as well. The researchers also attempted to discover forgetting patterns of subjects with immediate and delayed vocabulary recall tests and their attitudes towards learning vocabulary through L1 or L2 vocabulary glosses or vocabulary glosses with example sentences. The experiment consisted of three phases. In the first phase, subjects were pre-tested on their prior knowledge of the 16 English target words. Then they read the assigned passage, which they gave back before beginning the post-test. The post-test comprised a reading comprehension task, and then an immediate vocabulary recall test. The

vocabulary test consisted of 16 English sentences, each with a blank that had to be filled in by selecting the best term from a list of 24 English items. After the vocabulary test the participants filled in the questionnaire eliciting information about their previous exposure to glosses as well as their personal views concerning the use and effectiveness of glosses. One week after reading the first delayed vocabulary recall test was administered. One week later it was followed by the second delayed vocabulary recall test. The findings showed that subjects from all four proficiency levels exposed to the three experimental gloss conditions outperformed subjects in the no-gloss condition on all vocabulary recall tests. However, no significant effects were identified for reading comprehension for any of the levels of proficiency. It was found that language proficiency was indeed a factor in gloss effects, but not all levels received equal benefit. As for examining the longer-term vocabulary retention, relatively higher scores were obtained on the immediate vocabulary recall test after their first encounter with the text and the accompanying glosses. In the questionnaire the subjects expressed positive opinions about the value of vocabulary glosses. Their responses also suggested that glossing may not have been widely used in the materials non-English majors dealt with. To ensure the meaningfulness of the study attention was paid to instrument reliability that refers to consistency of a particular research instrument. A number of experiments in L2 pedagogy are oriented at investigating various issues of enhancing vocabulary learning through reading. As reflected earlier, in this type of research, careful selections of reading texts as well as the selection of target words are crucial to ensure validity of the experiment. In Cheng & Good's study three criteria to ensure appropriate text selection were employed. First, the Fry Graph readability formula was used. Then, four English instructors completed a text difficulty evaluation form devised for this study. Finally, a pilot study using subjects with a similar background was conducted three weeks prior to the main study in order to determine the most suitable reading texts and verify the appropriateness of all the tests designed for the study. After examining the results one text was excluded because it was not suitable for the target level and another text was found.

Papathanasiou (2009) examined which manner of L2 vocabulary presentation is more helpful for L2 learners. The researcher wanted to evaluate two different ways of organizing new vocabulary for presentation: presenting semantically related words versus presenting vocabulary in an

unrelated fashion. The aim was to discover which of the two ways of presenting and organizing the teaching of new L2 lexis would produce better scores with regard to retention of the target items in a short-term test and a long-term vocabulary translation test. The research was conducted in Greece with the subjects from two intermediate classes including 31 intermediate juniors and another two classes with 32 adult beginners. One class at each level was taught the association between 60 English words and their Greek equivalents with words that were semantically related. The subjects in the other two classes were taught the association between 60 English words and their Greek equivalents with words that were presented in a mixed (unrelated) order. The treatment lasted for three weeks with a frequency of two lessons per week. At the end of the third week, an immediate vocabulary test was administered to all the classes. Two weeks later the subjects were tested again for long-term vocabulary retention. For the next three weeks, the classes were taught in a reversed fashion. The groups who in the first phase received semantically related words instruction were taught the association between English words and their Greek equivalents with the words grouped in a mixed order and the other classes were exposed to semantically related words teaching. The subjects then underwent an immediate vocabulary test and two weeks later a long-term vocabulary test. The presentation of new vocabulary as well as testing emphasized one particular aspect of knowing a word: the form-meaning connection. All the classes were exposed to the same teaching material. While the adult beginners performed significantly better on the unrelated vocabulary test than on the related vocabulary tests, children at intermediate level showed no significant difference in test scores between related and unrelated vocabulary. The results suggest that the presentation of unrelated vocabulary may assist learning of new L2 words more than related vocabulary only with adults at beginner level. However, the higher scores of adult learners could be assigned to higher motivation and a more conscientious approach of the learners. The positive side of the experiment was the fact that it was carried out in a natural setting of a real classroom environment.

The effects of pair work on word-building tasks were investigated by Baleghizadeh (2010). The use of pair work has become an established strategy in the foreign language teaching classroom. As there is a small body of research on the efficacy of pair work on grammar-focused activities, the researcher set out to investigate the effect of pair work on a widely used

form-focused activity, i.e. a word-building task through the Think-Pair-Share collaborative technique. According to the researcher this technique prepares students to participate more confidently in whole-class discussions. The teacher poses a question, gives students a few minutes to think about an appropriate response, and then asks them to share their ideas with a partner. Baleghizadeh's study aimed to compare the accuracy of word building tasks of two groups of students. The participants were 40 Iranian adult students (mean age – 18.5 years) in their second year of study in the four-year English Language and Literature degree programme at University in Iran. The participants were members of two different classes; 14 students in one class (the control group) and 26 in the other (the experimental group). Both classes were taught by the researcher. The students in both groups were told that they were taking part in a research study, and they all agreed to help the researcher. The study employed two texts – a leaflet and a newsletter – with 15 numbered gaps and 15 given words. The participants were required to fill in the gaps with the correct form of the given words. The control group completed the task individually. The subjects in the experimental group were asked to form self-selected pairs who were given two copies of the task. After carrying out the task in pairs they submitted one final copy. Before the experiment the participants in the experimental group were taught the Think-Pair-Share technique and made aware of basic collaborative skills such as asking for clarification, listening attentively, giving reasons, etc. The results showed that the students who completed the task collaboratively through the structured pair-work design of Think-Pair-Share produced more accurate answers than those who worked individually. As the researcher claims, the more students provide each other with elaborated explanations through collaborative dialogues, the more they can learn from each other. It is needed to emphasize that students have to learn or at least become aware of, some basic collaborative skill. Since the study involved a small number of participants and a limited number of targeted items, the findings could be considered as only suggestive. Further research should clarify whether all task types would equally benefit from this type of treatment. Similarly, the long-term effect of pair work and collaborative learning on the learner's word-building competence should be explored.

The opportunities for enhancing collocative competence of L2 learners through using Word Forks were investigated by Pratheeba (2011). The researcher focused on phrasal verbs teaching. According to the researcher

Word Forks can give an idea of all the objects that go along with a particular phrasal verb which provides learners with a wide and comprehensive view of the usage of phrasal verbs. The participants were 30 students from a university in India. The subjects were exposed to the three month course including the specific method of teaching phrasal verbs using Word Forks. A pre-test was conducted before teaching the course. At the end of the course, a post-test was administered to assess the students' performance. Both tests contained the same questions. After comparing the results of the pre-test and post-test it was concluded that using Word Forks could serve as a factor enhancing the collocative competence of the L2 learners. This study is an example of a one-group pre-test-post-test design. Since the experiment design lacked a control group, internal validity is weak because it is almost impossible to state with any confidence that the dependent variables (learners' better results in the post-test) were due to the independent variable (using of Word Forks). The internal validity might be greatly improved by the addition of one or more control groups.

Lindstromberg and Boers (2008) noted evidence that alliteration is relatively common in lexical chunks in English. They carried out three experiments to prove the mnemonic effect of noticing alliteration in lexical chunks. In the first experiment they addressed the possibility that two-word alliterative phrases (a day dream) would be more memorable than no repetition phrases (phone call). The second experiment investigated the likelihood that alliteration in chunks would be autonomously noticed. In the third experiment the effect on the recall of alliterative chunks of very brief teacher-led noticing of the phonemic / orthographic repetition was assessed. Participants in the first experiment were 25 second year students aged 20-21 at a college in Brussels. Their English proficiency was estimated to be at level B2. The target items included 26 phrases, each consisting of two monosyllabic words. 13 items exhibited classic front-front alliteration and 13 showed no salient repetitive sound pattern. Participants were exposed to 26 slips of paper containing target phrases. A few of the students dictated all the phrases to their partners. Then, the participants sorted the slips into one alliterating and one non-alliterating set. After the sorting task, they were asked to write down the phrases they could remember. The results confirmed the hypothesis that alliterative phrases are more memorable than non-alliterative. A delayed recognition test was given two weeks later. The participants were given 52 two-word phrases including the 26 target phrases

and 26 “distractors”. The results of the delayed test also confirmed the mnemonic effect of alliteration. In the second experiment the researchers addressed the question whether learners were likely to spontaneously notice alliteration in everyday lexical chunks. The participants were 31 students (aged 21-22) from Brussels specializing in languages with B2- C1 language proficiency. They were again given the 24 slips to sort. The phrases on the slips represented four conditions – rhyme, alliteration, assonance, and no pattern of phonemic repetition. The findings showed that most students failed to notice the alliterative category. It could be concluded that the sound repetitions need to be pointed out by teachers and materials writers. In the third experiment the researchers wanted to find out whether pointing the patterns of alliteration out could make any difference. The participants in this experiment were two intact classes of language majors in a higher education college forming experimental and control groups. Through the experiment all the subjects were exposed to 10 hours of authentic materials including programmes recorded from BBC television or from BBC Radio 4 distributed over a 3 month period. After each listening students summed up the content of the programmes in pairs. Then they listened to the programme again with the aid of partial transcripts. Language-noticing tasks comprised fill-in-the-blank exercises. The input and the exercises were identical in both groups, however, in the experimental group the teacher alerted the students to the alliteration. The post-test which consisted of 20 fill-in-the-blank items and invited reproduction in short contexts of seven alliterative phrases, one rhyming phrase and 12 phrases without salient phonological repetition, showed slightly better results in the experimental group in recalling phrases whose sound pattern had been pointed out by the teacher. As for other phrases, the control group performed slightly better. All three experiments were limited by the rather small number of subjects involved. Nevertheless, the study has drawn attention to alliteration as a potential mnemonic factor which can contribute to the development of adult students’ vocabulary.

To summarize, out of the 24 retrieved experimental studies 13 experiments share similar goals which include an effort to understand how second language vocabulary items are learned and taught, together with a commitment to improving the efficiency and ease of learning. Most of the analysed studies tend to be quasi-experimental rather than truly experimental. Our search has confirmed that it is often difficult to conduct educational studies with human participants that are pure experimental

studies. The central concerns of vocabulary researchers are the sources of L2 vocabulary learning with regard to methods of instruction. The 13 vocabulary experiments listed in this paper have dealt with quite different aspects of vocabulary acquisition, e.g., repetition, implicit/explicit vocabulary acquisition issues, the influence of contextual factors in the development of lexical competence, the benefits of using glosses, dictionaries, translation, Contrastive analysis etc. Nevertheless, there are some common concerns that can be pointed out. The issues of subjects, native and target languages, number of target words to be learned, the length of the treatment and the inclusion of delayed testing are summarized in the following table.

Tab. 7: The overview of the 13 experiments in vocabulary acquisition and development. The abbreviation US indicates *university students*.

AUTHOR	SUBJECTS	TARGET LANGUAGE	NATIVE LANGUAGE	NO. OF TARGET WORDS	LENGTH OF THE TREATMENT	DELAYED POST-TEST
Xu, 2010	60 1 st year US	English	Chinese	10	1 class period	after 5 days
Webb, 2007	121 2 nd year US	English	Japanese	10	1 day	none
Webb, 2008	50 2 nd year US	English	Japanese	10	1 90 min class period	none
Chen & Truscott 2010	72 1 st year US	English	Mandarin	10	1 class period	2 weeks later
Vidal, 2011	248 1 st year US	English	Spanish	36	3 lessons within a 4-week period	1 month later
Rashidi & Piran, 2011	120 adult female learners (age 16-28)	English	Persian	not given	40 sessions	None
Sonbul & Schmitt, 2010	40 1 st year US	English	Arabic	20	1 teaching session	1 week later

Laufer & Girsai, 2008	75 pupils aged 15-16	English	Hebrew	10 single words, 10 collocations	2 days	20 minutes after the first test, 1 week later
Cheng & Good, 2009	135, US	English	Chinese	16	50 minutes	1 week later, 2 weeks later
Papathanasiou, 2009	31 juniors, 32 adults	English	Greek	60	2 three week periods; 2 lessons per week	2 weeks later after each 3 week period
Baleghizadeh, 2010	40 adult 2 nd year US	English	Persian	15	1 teaching session	None
Lindstromberg and Boers 2008	25 / 31 / 2 intact classes US	English	Flemish Dutch	26 / 24 / 20	1 teaching session / 10 hours over a 3 month period	2 weeks later
Pratheeba, 2011	30	English	Hindi	not specified	3 month course	None

From the information obtained from the examined articles, it is evident that the learning of English is at the centre of the researchers' attention in L2 vocabulary research. The experiments were carried out mostly (6 studies) with participants from Asian countries. Three experiments involved participants from European countries and the rest of the studies include participants of Arabian, Iranian and Israeli origin. If we want to make any general, universal statements about developing foreign vocabulary, the fact that different types of languages present rather different learning problems to individual learners must be taken into account. The numbers of subjects who took part in the experiments ranged from 25 to 248. As there is no explanation for the numbers of subjects in the examined articles, it can be concluded that the researchers conducted experiments with subjects

available and the numbers of subjects are arbitrary. As for the type of population involved in the studies, they were mostly a highly educated population (university students). It follows that most research has been conducted with adults rather than children and quite often with those available in the researchers' own classes. The studies are comparable – apart from two exceptions involving 36 and 60 target items – with regard to the number of target words to be learned. The numbers of target words ranges from 10 to 20. The question is whether investigating how these low numbers are acquired is sufficient to make assumptions on acquisition and development of an entire vocabulary. As for the length of the treatment, most of the experiments were carried out within one teaching session. While small numbers of words can be handled quite easily, larger vocabulary would take time and effort to develop. Thus most of the studies employed a delayed post-test to check the retention of the lexical items. Further investigations into vocabulary acquisition and development should involve studying the possibilities of long-term vocabulary enhancement with L2 learners.

Practices and trends in experimental research currently employed in the field of vocabulary development can take various forms. It is obvious, that the experimental approach in foreign language pedagogy is not without problems. Researchers involved in this field are faced with a number of limitations such as balancing internal and external validity, ensuring reliability of research instruments, eliminating validity threats, etc. If researchers want to draw valid conclusions from their research, many steps have to be taken from its design to its analysis and interpretation of the results. We believe that understanding key concepts and issues in experimental designs, examining practices and trends related to the application of experimental research methods within the field of foreign language instruction will contribute to better research practices.

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Abstract

The aim of the paper is to synthesize the recent findings of experimental research into vocabulary learning, acquisition and development. In the first part, attention is paid to the theoretical background of experimental research methods in the field of foreign language teaching. The central concepts and terms related to the area of experimental method are exemplified. In the second part of the paper, we try to enhance knowledge in experimental research approaches by looking for and examining practices and trends related to the application of experimental methods in academic articles in journals focused on research in foreign language teaching and learning. The focus is laid on experimental studies investigating further possibilities of foreign language learners' vocabulary development. After presenting 13 experimental studies aimed at vocabulary enhancement, some of the current challenges in the field of vocabulary experimental practise are addressed.

Keywords

experimental method, foreign language teaching and learning, vocabulary acquisition and development.

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