Action research in teacher development:

an overview of research methodology

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Edited by
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Abbreviations

AR	—	action research
BIAS	—	Brown's interaction analysis system
CA	—	contrastive analysis
EA	—	error analysis
EFL	—	English as a foreign language
ESL	—	English as a second language
FIAC	—	Flanders' interaction analysis categories
FL	—	a foreign language
FLL	—	foreign language learning
FLT	—	foreign language teaching
LA	—	language awareness
LTM	—	long term memory
L1	—	the first language (mother tongue)
L2	—	the second language
MLA	—	multilingual language acquisition
SI	—	simultaneous introspection
SLA	—	second language acquisition
STM	—	short term memory
TAP	—	a think(-ing) aloud protocol
TEFL	—	teaching English as a foreign language
TESOL	—	teaching English to speakers of other languages
TTC	—	teacher training college

Preface

This book has grown out of the perceived need for and desire to promote reflectivity: reflectivity in teaching and reflectivity in learning. The context for this is well-defined here, that of foreign language learning and instruction, but its relevance and utility go far beyond this application. Reflectivity is required in all areas of our life, professional and personal. It is my deeply-held belief that teachers who think of themselves as continuously developing learners become more successful and in the long run can avoid the well-known 'burn-out' stage in their career. This is particularly so if they 'catch the bug' early enough and get involved in their own classroom-based research, that is, action research (AR) conducted for their own purposes.

This volume is to constitute a basic working tool both for students in teacher training programmes and for in-service teachers with varied degrees of professional experience: novices as well as experienced pedagogues. It introduces the idea of action research (AR) and outlines its various stages and procedures ("Introducing action research..."). The chapters that follow present the main research methods and tools in a way that is adapted for individual mini-scale action research projects teachers and students can design themselves. Each chapter is structured in the same way. It starts with a description of an appropriate method, which later on is illustrated with examples of studies based on this given method. To give teachers and students some practice, discussion questions and practical tasks are proposed in each case. As each method/tool is described in a somewhat synoptic fashion, additional source material is presented in the form of an *Additional reading* section in each chapter, to allow the user to

supplement and expand his/her knowledge in a given area. In the final part of the volume the reader will find a *Glossary of terms*, containing definitions of the key concepts and terminology presented in the book. The additional material which is included in the *Appendices* may be of help in designing and writing a research proposal and even the project itself. This book however is not concerned with instruction on academic writing per se nor in the formal side of presenting a final dissertation or project. Nevertheless, it does refer the reader to useful sources on the writing up of a project report or thesis by indicating relevant printed guides in the *Appendices*.

All the authors in this book, who generously agreed to participate in this project, are researchers and teacher trainers at the University of Silesia and at various teacher training colleges in the region. I would like to thank them for their enthusiasm for and commitment to promoting action research work among our trainee students and in-service teachers, who are still engaged in developing their professional abilities and extending their qualifications.

I hope that this little volume will offer encouragement and advice to teachers and students eager to develop their own AR projects and so become more reflective and, as a consequence, more autonomous in their teaching. I also trust that getting involved in one's own research will inculcate the curiosity and enthusiasm for teaching which is a sine qua non for sustaining high professional standards, here sought and applied to the teaching of a foreign language.

Danuta Gabryś-Barker

Closing remarks

Pre-service teachers to whom this book is mainly addressed are still involved in their course of studies designed to give them professional qualifications to teach. They have obligatory courses in theoretical psycho-pedagogy, applied linguistics and EFL methodology. These courses include some elements of classroom practice. However, they need to be supplemented by the practicum, which entails both passive observations at school and active teaching in the final year of their studies. Although it is very limited in terms of time, if properly designed and supervised, it can be an invaluable source of professional growth for pre-service teachers. It constitutes their first encounter with a classroom and becomes the first point of confrontation between theoretical knowledge gained throughout their studies and classroom realities.

The trainees' teaching practice should also be seen as an opportunity to develop their enthusiasm and curiosity about and reflection on their own, often not very effective, classroom practices. One of the ways of achieving this is by allowing the trainees to diagnose their own problems and implement corrective measures by designing their own mini-scale projects.

During approximately ten years of experience of implementing action research projects in the programme of studies at the pro-seminar level in university and teacher training college diploma classes, it has been observed that the students' attitude to teaching has changed. AR projects have allowed pre-service teachers to see that they themselves are responsible for their effectiveness in their own classrooms. They have become more open and flexible in their practices. They have also become more enthusiastic about EFL teaching. They register their own

development, as one of the students remarked recently: 'In action research teachers are learners.'

When surveyed and asked to express their views on the experience of carrying out their projects, the students saw the advantages of such experiential learning in the following terms:

1. The projects stimulated them to expand and update their theoretical knowledge by means of an extensive study of available sources, focusing solely on area of interest.

2. The project helped them to develop analytical skills (e.g. spotting the problem, defining it, collecting and analysing data): 'It allowed me to understand better the relation between the process of teaching and the process of learning'; 'I became more aware of certain mechanisms taking place in the classroom.'

3. The projects showed how important it is to experiment, to introduce change, to improve the situation: 'Yes! A lot of advantages — self-development, finding new things, experimenting with new ideas, becoming aware of many things in the classroom.'

4. The projects helped in finding out more about the learners themselves: their attitudes, preferences, needs and motivations.

5. The projects made the students aware of how important it is to talk to learners and negotiate what happens in the classroom in terms of types of activities, forms of work used, etc.: 'It made them (learners) realize that they also should feel responsible for the process of learning'; 'They feel important because of the project and able to change something they would like to.'

6. The projects brought a change in teaching and in the learners themselves: 'The results are already visible — teaching children is very rewarding — children come to classes quite willingly now'; 'They could freely express their opinions and thoughts which will be helpful for me in future lesson planning.'

7. The projects inevitably led to confrontation between what was read in the books and what actually happened in the classroom: 'I have learnt when doing my project that what is written in methodology books not always corresponds to a real situation in a classroom. So by doing research projects, I can learn something about practical methods in real life and about students.'

8. The projects let students see the importance of classroom atmosphere 'It is a real challenge but really helpful in my future teaching'; 'It is a good idea for beginning teachers, especially if results can be exchanged and compared in discussion among teachers'; 'The personal reasons for my project? I want to be a different and motivating teacher!' (Gabryś-Barker 2006).

The student-teachers also emphasized that the project was advantageous for the learners. It made them more aware of themselves as a part of the teaching process and of their own motives for learning a foreign language. The project also allowed learners to share their learning problems with their peers. It made them more autonomous in their learning decisions and resulted in improved rapport between teachers and their groups. At the same time, all the above advantages contributed to the learners' higher awareness of their own potential as learners and as people (Gabryś-Barker 2006).

Despite the positive sides of action research, pre-service teachers perceived designing and carrying out AR projects in their classrooms to be difficult. One of the difficulties encountered was the need to be better acquainted with the range of research tools available for data collection. It is the purpose of this volume to make these research instruments more available to pre-service teachers by giving them some theoretical background in research methodology and also providing examples of how research instruments are constructed. These examples are illustrated here with instances of empirical studies of the AR type to provide a better understanding of how they work. Also questions and tasks to be performed by the students are designed to offer some practice in how to construct and use the research tools introduced in each individual chapter of the book. Thus, the book has been prepared with a view to facilitating the research work of trainee teachers, our students, who hopefully will 'catch the bug' and become enthusiastic reflective practitioners and therefore more effective and successful teachers, both right away and later on in their professional lives.

Danuta Gabryś-Barker

Glossary of terms

action research   teacher-initiated inquiry in his/her own classroom, aiming at diagnosing and defining a classroom problem and finding solutions to it through classroom study, which is not generalizable

ad hoc approach   an approach to observation making use of the list of categories designed for a particular purpose by the researcher him/herself

acquisition   (language a.) a subconscious process of developing one's language competence, usually refers to L1 (mother tongue) and L2 (second language) in its natural context as contrasted with classroom instruction

attendance to input   the way a language user (a language learner) approaches a language task

affective filter   a processing mechanism based on one's affective features such as attitude, confidence, self-esteem or anxiety

affective processing   processing related to feelings and emotions, usually only partially uncontrolled influence of emotions on behaviour, thinking and language production, operates through the affective filter

Ballack's system   a fixed system of categories ('moves') aimed at measuring classroom interaction by means of recording and then transcribing data

BIAS   Brown's Interaction Analysis System; a fixed system of categories for the real-time coding of classroom behaviour, with the use of a tabular time-line display

case study   an intensive, holistic, contextualized and naturalistic study of an aspect of behaviour, either at one period in time or over a long period of time. It focuses on contemporary phenomenon

closed-ended/closed question   a questionnaire item with a determined range of possible responses

cloze task   a language task in which individual words were removed at regular intervals, for example, used in reading comprehension tests

construct validity   correct operational measures demonstrating that selected measures of changes do indeed reflect selected types of changes

control group   any group of subjects participating in an experiment who receive the standard treatment (or no treatment), included in the design in order to provide a baseline for comparison

cognitive processing   analysis of language chunks at the level of decoding (comprehension) and encoding (language production) by employing analysis and synthesis in thinking

cross-linguistic consultations   another term for language transfer (see **language transfer**)

declarative knowledge   knowledge of a language system, its rules at the level of different language sub-systems (lexical, morphosyntacic, etc.)

descriptive statistics   statistics used to describe a set of data in quantitative terms, these are measures of central tendency (the mean, the median, the mode) and measures of variability (the range, the standard deviation), and frequency counts

dialogical journal   a classroom instrument used by a teacher to communicate with a learner in the form of an interactive diary, used to diagnose learner's needs, motivations and attitudes, and also learning problems

diary   a retrospective method of data collection, in classroom research can take the form of a written reflection on one's experiences concerning teaching — a teacher diary or learning — a learner diary (see also a **dialogical journal**)

educated talk   language used as a critical tool, e.g. to express one's opinions

ethnographic approach   a more open-ended approach to observation enabling the researcher to first identify the area of research and then devise appropriate instruments

experimental group   any group of subjects participating in an experiment who receive the experimental treatment, i.e. the treatment being studied in the experiment. The results of an experimental group can be compared with the results of other experimental groups and/or the control group(s)

experimental method   a research method in which causal relationships between variables are investigated under controlled conditions. In a **true experiment**, the subjects are randomly assigned to experimental and control groups in order to compare their performance on the dependent variable(s). In a **quasi experiment**, both experimental and control groups are included in the research design, but there is no random assignment of subjects

external validity   the extent to which a particular finding can be generalized beyond the case under investigation. It is perceived as the major limitation of case study research

FIAC   Flanders Interaction Analysis Categories; a fixed system of categories used for measuring the teacher and pupil talk on a tally sheet of paper by means of a pen-and-paper technique

hypothesis   a formal statement about the possible outcome of a study. The hypothesis of no relationship between independent and dependent variables in the population is called the **null hypothesis**

hypothesis testing a set of procedures used to establish the **statistical significance** (probability of not having occurred by chance) of the result obtained from sample data

inner speech an internal dialogue with oneself, silent speech (Vygotsky)

inferential statistics statistics used to draw inferences and make generalizations about the population on the basis of sample data (see also **hypothesis testing**)

input any language sample one is exposed to

internal consistency the homogeneity of the questionnaire items addressing one content area, measured by the *Cronbach Alpha coefficient*

internal validity defined as the extent to which researchers have really observed what they decided to observe and have addressed all the critical observational data

interval/metric data values which represent measurements, such as sizes, degrees and proficiency scores

introspection expressing one's own thought, reflections and emotions on a given subject

item pool a set of potential questionnaire items

language transfer influence between languages in the possession of a given language user, for example influence of the mother tongue on a foreign language (a substratum transfer) or vice versa (a borrowing transfer), it can be positive or negative (interference)

learner autonomy learner responsibility for his/her own learning process and its effects, operates on the level of choosing one's goals and ways of achieving them

learning a conscious and usually instructed process of acquiring knowledge in a given area

lexical search a strategy (or a set of strategies) of guessing word meaning from the context (comprehension) or recalling it from memory using different types of strategies (production)

long term memory (**LTM**) see **memory**

memory an ability to store information, two types are distinguished — short term memory (STM) — storage of information for short periods of time (several seconds) to be registered, analysed and transferred to long term memory (LTM) where it is stored permanently

metalanguage the language which is used to describe a language: concepts, terms and rules

metalinguistic awareness consciousness of how a language system works, includes knowledge of metalanguage

multi-item/summative scales scales consisting of a set of differently worded questions which measure the same target

nominal/categorical data values which identify and categorise data without any ranking, e.g. categories of male and female

non-participant observation an observation during which the observer watches the situation and collects data without interacting with its participants

non-verbal behaviour   behaviour sending and receiving wordless messages, e.g. by means of facial expression or gesture

observation task   a focused activity to work on while observing a lesson in progress

off-task behaviour   a behaviour unrelated to the activity set by the teacher, such as playing with materials or talking to others

on-task behaviour   a behaviour related to the activity set by the teacher

open-ended/open question   a questionnaire item in which the respondents decide the content and style of their response

open interview   also called unstructured or nonscheduled interview, it provides the interviewee with broad freedom of expression and elaboration and often resembles informal talk

operationalization   defining a theoretical construct in empirical terms, i.e., in the form of specific observations. An example of operationalization would be defining language aptitude as a score on the Modern Language Aptitude Test (MLAT)

ordinal data   values which serve to divide the sample into groups and assume ranking, e.g. grouping the sample according level of proficiency

output   any sample of language produced

participant observation   an observation during which the observer collects data by interacting and, therefore, experiencing the phenomenon being studied

pen-and-paper technique   a technique of recording the information using a pen and a sheet of paper

population   a larger group of individuals who share one or more characteristics

private speech   as defined by V y g o t s k y, it means thinking aloud by a child as a stage in cognitive development, leads to inner speech; also used in relation to foreign language learning

professional creativity model   a model of teachers' professional creativity development carried out by means of diary writing, participant observations and self-observations

procedural knowledge   the term describing knowledge of how to use language, in other words, knowledge of strategies of language use

qualitative data   non-numerical, exploratory data

quantitative data   data suitable for statistical calculations

questionnaire   a data collection instrument, written or oral, which makes use of a variety of closed and open questions

random assignment   a procedure of allocating subjects to the comparison groups in an experiment in such a way that each subject has an equal chance of being included in any of the control or experimental groups

reliability   the extent to which the research instrument is free from errors of measurement, e.g. in experimental research; the extent to which an experiment yields consistent results on replication, i.e. when it is repeated under the same conditions

real-time observation   observation carried out while the lesson is proceeding, by means of checklists or taking notes

reliability the extent to which the research instrument is free from errors of measurement, i.e. ensuring that data collection techniques can be replicated with the same results

retrieval another term for recall of, for example, a language chunk from memory by means of various strategies

semi-open interview (also called semi-structured or moderately scheduled interview) involves specific core questions determined in advance from which the interviewer branches off to explore in-depth information, probing according to the way the interview proceeds, and allowing elaboration, within limits

short term memory (**STM**) see **memory**

structured approach an approach to observation guided by an observation schedule allowing for collecting data of a more objective kind and in a systematic way, e.g. in a system-based, ethnographic or ad hoc way

structured interview (also called structured, highly scheduled or highly scheduled standardized interview) — consists of questions defined from the start and presented to the interviewee. No elaboration is allowed in either the questions or the answers. This type of interview is usually employed when uniform and specific information is needed and when it is necessary to interview a large number of subjects

system-based approach an approach to observation making use of a fixed list of categories, such as Flanders or Ballack's system

taped observation an observation which is recorded by means of a video or audio tape

teacher autonomy teacher's individual responsibility for his/her own teaching by being reflective and open to new ideas, beyond the prescribed ones in terms of methods, materials, techniques, etc.

teacher developer a coordinator supporting and guiding teachers, e.g. a senior staff member or head teacher

think aloud protocol (**TAP**) transcribed verbalizations of one's own thinking processes and emotional states at the moment of performance of the task

transcript a written account of the words spoken in the video or audio tape

transfer of learning a learner's ability to use his/her knowledge and strategies of learning in different contexts of learning

transfer of training influence of the method of teaching to which a learner was exposed on his/her approach to learning and on learning strategies

triangulation a process of verification of the data collected; possible types of triangulation include: time, place, theory, research instruments, researchers, etc.

teachers' professional creativity a special type of creativity aimed at modifications and improvements of the teaching-learning process introduced by particular individuals

validity in experimental research: the extent to which the experiment can clearly establish a cause-effect relationship between independent and dependent variable(s), i.e. the degree to which it can be claimed that any

change observed in the dependent variable occurred as a result of the treatment (**internal validity**), and the extent to which the results of the experiment can be generalized beyond the sample (**external validity**)

variable   a property or characteristic that can vary, i.e., take on at least two values. Depending on the scale of measurement, variables can be divided into **non-continuous** (nominal) variables and **continuous** (interval or ordinal) variables. As regards their function in a research design, variables can be classified as **dependent**, i.e., the variable(s) of focus, measured by the experimenter, or **independent**, i.e., those potentially affecting the dependent variable(s), manipulated by the experimenter

verbal behaviour   a behaviour sending and receiving messages by means of words

verbatim transcript   a word-for-word transcript of what is said in the recording, including common fillers, such as 'erm', 'er'

Appendices

Appendix 1. Action research project thesis/structure

Action research mini-scale project (title)

Introduction:
- general area of interest
- title of the project
- purpose of the study/its significance
- limitations of the study

Chapter 1. Theoretical background (literature overview)
Introduction (content of the chapter)
1.
1.1.
1.2.
1.3.
2.
2.1.
2.2
2.3. (etc.)
Summary

Chapter 2. Research design
1. The research questions/hypothesis
2. The subjects used in the study (description: numbers, background, etc.)

3. Data collection methods (description of the methods e.g. presentation of a questionnaire, etc.)
4. Stages of the project and procedures

Chapter 3. Data presentation and analysis
1. Introduction
2. Data presentation and analysis
3. Summary of findings
4. Answers to the research questions

Chapter 4. Implications for teaching/learning
1. Introduction
2. Implications for teaching
3. Implications for learning
4. Project evaluation
5. A way forward

Appendices
References

Appendix 2. Examples of AR projects (titles of BA/*licencjat* thesis)

Visual materials in developing speaking skills of adolescent learners
A profile of an adult learner (a case study of two)
Teaching pronunciation at the level of segmentals (a case study of an adult learner)
Developing FL writing skills of young learners
The use of songs in teaching English tenses at the primary school level
Teaching idioms at pre-intermediate level
Developing listening comprehension by using authentic video materials in a FL classroom
The role of movement in FL development (the case of young learners)
Multisensory teaching of dyslexic children
The influence of a seating arrangement on teaching and learning a FL
Teaching English article system to Polish learners
Ways of oral assessment
Code-switching as a communication strategy in a FL classroom context
Effectiveness of rewards in teaching a FL to teenagers
Pre-communicative activities — encouraging students to talk
Mind-mapping as a way of teaching and learning a FL vocabulary
Project work in autonomy development

L1 in teaching FL vocabulary
The facilitative function of false friends
Implementing mnemonic strategies into FL vocabulary learning
Transfer of learning as a learning strategy
Language portfolio in the process of developing learner autonomy
Reward and punishment in teaching very young learners
Adapting a course-book for young learners
Teaching and learning phrasal verbs
Motivational aspects of pair and group work
Corrective feedback in development of speaking skills
Teaching adults: focus on FL grammar
Teaching English to kindergarten children — a syllabus proposal
Code-switching in a FL classroom
Effectiveness of inductive approach in teaching English questions
The ways of motivating discouraged and de-motivated children to learn a FL
The role of positive transfer in FL learning
Learning strategies used in the process of learning English prepositions
Business English at a secondary vocational school
Teaching children with symptoms of ADHD
Prevention and reaction to discipline problems in the classroom
Teaching English as a FL to a dyslexic learner (a case study)
The role of awareness of language transfer in TEFL
A profile of an unsuccessful FL learner
Raising learners' awareness of lexical collocations
Teaching grammar to young learners
Testing from teachers' and learners' perspective
Application of authoritarian teaching style in FL instruction
Continuous assessment from the learner's perspective
Warm-up activities in development of reading comprehension
Lesson planning: integration of four language skills
Development of cultural awareness in student exchange programmes
The importance of accuracy in the process of communication
Reading comprehension test in matura examination

Appendix 3. Additional reading sources for students and teachers

Action research: topics and research methods

Allwright D., 1988: *Observation in the Language Classroom.* London/New York: Longman.

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Richards J., 1995: *Reflective Teaching in Second Language Classrooms.* Cambridge: Cambridge University Press.
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