PEDAGOGICAL ACTION RESEARCH PROJECTS TO IMPROVE THE TEACHING SKILLS OF EGYPTIAN EFL STUDENT TEACHERS

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Abstract

The purpose of this study was to investigate the effect of Pedagogical Action Research Projects on Egyptian EFL student teachers' teaching skills. Participants of the study—31 EFL students at Suez Faculty of Education, Suez Canal University—were pretested on teaching skills. Each participant completed a Pedagogical Action Research Project as part of the ELT Methodology course they studied that term. In completing the projects, participants 1) identified and limited topics, 2) reviewed the literature related to these topics, 3) developed research plans, 4) implemented the plans and collected data, 5) analyzed the data, 6) developed action plans, 7) shared and communicated the results they reached and finally 8) reflected on the whole process. Participants were posttested on teaching skills. Results revealed that participants achieved significant gains in teaching skills between pretest and posttest. Therefore, it was recommended that action research be used as a tool for professional development of Egyptian EFL teachers.

Keywords: Action Research, Teaching Skills, EFL Student Teachers.

1 INTRODUCTION AND PROBLEM OF THE STUDY

The quality of education does not only depend on school programs and infrastructure but equally important is the quality of the teaching occurring in the classrooms (Rowe & Rowe, 2002)[1]. Therefore, teachers should continuously try to improve their teaching skills. In Egyptian schools, the ability to improve teaching skills has been largely left to teachers' voluntary readings, feedback from supervisors, outside experts giving isolated sessions that are detached from the everyday realities of teaching or some in-service courses which depend on the teachers' ability to apply their new knowledge and skills to their classes. These types of teacher resources were typically unproductive in developing teaching skills (Ingvarson, Meirs & Beavis, 2003)[2]. As a result, there should be a shift to another approach where teachers become "active learners shaping their professional growth through reflective participation in both programs and practice" (Clarke & Hollingsworth, 2002, p.984)[3]. Consequently, the call for professional teachers requires them to transform and readjust their old methods and skills and enhance their abilities to reflect on their actions in the teaching process in order to become good teachers (Duan & Ren, 2011)[4].

As a lecturer at the Curriculum and Instruction Dept. at Suez Faculty of Education, the researcher observed the low level of teaching skills student teachers used to show during their Teaching Practice. Moreover, she held several interviews with supervisors who complained about the weaknesses student teachers suffer from when teaching English at schools. Many of these students also revealed their dissatisfaction with their performance as teachers as well as their desire to narrow the gap between what they study at the faculty and how they teach at schools.

2 STATEMENT OF THE PROBLEM

The problem of the present study is that EFL student teachers suffer from some weaknesses in teaching skills. Therefore, this study attempts to find an answer to the question: How to improve Egyptian EFL student teachers' teaching skills? Recently, action research has become increasingly popular around the world as a "form of professional learning" (McNiff & Whitehead, 2011, p. 7)[5], especially in second language teaching (Burns, 2010)[6]. It is used as a systematic process of solving educational problems (Tomal, 2010)[7] and improving teachers' practices (McNiff & Whitehead, 2010[8]; Sagor, 2011[9]) through teachers' use of the techniques of research (Ferrance, 2000)[10] in order to improve their understanding of their teaching practices and the situations in which these practices are carried out (Kemmis & McTaggart, 2000)[11]. Therefore, the researcher decided to investigate the use of pedagogical action research as a means to develop Egyptian EFL student teachers' teaching skills.

3 LITERATURE REVIEW

3.1 What is pedagogical action research?

Kurt Lewin is generally credited as being the founder of action research (Lewin & Lewin, 1948)[12]. Action research has been traditionally defined as "an approach to research which is based on a collaborative problem solving relationship between researcher and client which aims at both solving a problem and generating new knowledge" (Coghlan & Brannick, 2010, p. 35)[13]. It is a methodology employed for improving conditions and practices in practitioner-based environments such as administrative, leadership, social, and community settings (Craig, 2009)[14]. It is a systematic inquiry with the goal of informing practice in a particular situation (Mettetal, 2003)[15] through following the conventions of doing research (Norton, 2009)[16].

In the field of education, pedagogical action research, also called classroom research (Charlevoix, 2008[17]; Dana & Yendol-Hoppey, 2009[18]), teacher-led research (Jayraj, 2009)[19], and collegial inquiry (Cunningham, 2011)[20] involves taking a self-reflective, critical, and systematic approach to exploring the teacher's own teaching contexts (Burns, 2010)[6]. It specifically refers to a disciplined inquiry done by a teacher with the intent that the research will inform and change his/her practices in the future. This research is carried out within the context of the teacher's environment—that is, with the students and at the school in which the teacher works—on questions that deal with educational matters at hand (Ferrance, 2000)[10]. The fundamental purpose of pedagogical action research is to systematically investigate one's own teaching practices, with the dual aim of improving these practices and contributing to theoretical knowledge (Norton, 2009)[16]. More purposes include: training teachers in systematically analyzing their own methods and expertise (Rees, Baron, Boyask, & Taylor, 2007)[21], aiding their reflective thinking which results in action (Ponte, 2002)[22], supporting professional efficacy (Wahlstrom & Ponte, 2005)[23], and enhancing the quality of teaching and learning (Kember, 2000)[24].

3.2 Advantages of pedagogical action research

Pedagogical action research offers many advantages. First, it can be a powerful tool for professional enquiry (Koshy, 2010[25]; McNiff & Whitehead, 2011[5]; Stringer, Christensen, & Baldwin, 2010[26]), as it enables the teacher to analyze his/her own practice (Rees et al., 2007)[21] thereby becoming an "investigator" or "explorer" of his/her personal teaching context, while at the same time being one of the participants in it (Burns, 2010, p. 2)[6]. This is much more likely to appeal to teachers' intellectual curiosity than more compulsory methods of becoming more knowledgeable about the learning and teaching literature (Breslow, Drew, Healey, Matthew, & Norton, 2004)[27]. As Duan and Ren (2011)[4] point out, teachers often have few opportunities to evaluate themselves in schools and action research can be a chance for any teacher to think about his/her teaching in a structured manner. Another benefit of pedagogical action research is that it is a promising method for teachers' successful professional development (Liu, 2009)[28]. Action research is a way for teachers to discover what works best in their own classrooms (Mettetal, 2003)[15] through reflecting on their own practice by systematically gathering information and then using the insight and data gained to develop ways to improve their practice (McCormack, Reynolds & Ferguson-Patrick, 2006)[29]. That active participation of teachers will lead to a bright future of professional development and fulfilment (Duan & Ren, 2011)[4]. Consequently, action research will help teachers: improve their teaching, document their teaching, and renew their excitement in teaching (Mettetal, 2003)[15].

A further benefit of pedagogical action research is ameliorating the theory-practice gap in learning and teaching, referred to by Carr and Kemmis (1986)[30] as 'praxis' (Goodnough, 2003)[31]. Although academic research is often seen as disconnected from the daily lives of educators, action research is conducted by teachers by connecting their daily work with academic research and accordingly benefits their development in profession (Duan & Ren, 2011)[4]. A further benefit of pedagogical action research is that it encourages collaboration (Hannay, Telford & Seller[32], 2003; Norton, 2009[16]) offering its participants a common ground and a common language to develop collaborative ambitions (Cook & McCallum, 2007)[33]. Being a leading part in a room of students, teachers have little or no time for professional interactions with others. Through pedagogical action research, teachers have opportunities to talk with others about teaching skills and strategies (Duan & Ren, 2011, p. 498)[4]. Therefore, they decide for themselves what to do, "in negotiation with others" (McNiff & Whitehead, 2011, p. 8)[5]. Another benefit of action research is improving teachers' self-efficacy beliefs (Duan & Ren, 2011)[4]. Teachers who conduct action research tend to be more creative, open-minded, positive and holistic, compared to those who use old traditional ways of teaching. All these characteristics are considered to be solid evidence for high teaching self-efficacy beliefs (Liu, 2009)[28]. More importantly,

action research encourages teachers' ownership of the change initiatives and gives them a voice (Hannay, Telford & Seller, 2003)[32].

3.3 Steps of pedagogical action research

Since there is no one right way to carry out action research (Goswami & Rutherford, 2009[34]; Sagor, 2011[9]), many models for action research were introduced. Lewin's approach to action research can be summarized as a series of steps composed of planning, action and then fact finding about the result of the action taken (Lewin & Lewin, 1948)[12]. Although many researchers used this approach, more frameworks of action research were introduced. For example, the model of Kemmis and McTaggart (1988)[35] consists of a dynamic process of planning, action, observation, and reflection. These four broad phases are in a cycle of research which may become a continuing, or iterative, spiral of cycles which recur until the action researcher has achieved a satisfactory outcome and feels it is time to stop (Burns, 2010, p. 7)[6]. Ferrance (2000)[10] summarizes the steps of another action research model. These steps are: identifying a problem area, gathering data, interpreting data, acting on evidence, and evaluating results.

According to Norton (2001)[36], the action research cycle consists of: identifying a problem, thinking of a way to tackle the problem, doing it, evaluating it, and modifying future practice. Another framework of action research is offered by Mettetal (2003)[15] in which an action research project goes through seven steps: identifying a question, reviewing the literature, planning a research strategy, collecting data, analyzing data, taking action based on results, and sharing findings. For Jenny and Snyder (2010),[37] action researchers generally follow a process consisting of: issue identification, data collection, action planning, plan activation, and outcome assessment. McNiff and Whitehead (2011)[5] offer an action research plan composed of: taking stock of what is going on, identifying a concern, thinking of a possible way forward, trying it out, monitoring the action by gathering data to show what is happening, evaluating progress by establishing procedures for making judgments about what is happening, testing the validity of claims to knowledge, and modifying practice in light of the evaluation.

3.4 Pedagogical action research and teaching: Previous research

Many studies investigated the effect of pedagogical action research on teaching and most of them showed a positive impact for action research on teaching. See Table 1, below.

Table 1. Studies investigating the effect of pedagogical action research on teaching

Researcher(s)	Impact of action research on teaching
Hernandez-Tutop (2001)[38]	Improved teaching outcomes
Mingucci (2002)[39]	increased personal and professional confidence as well as increased reflexivity and confidence as researchers
Hannay, Telford & Seller (2003)[32]	significant shifts in teaching from being an artificial process to addressing real issues, from isolated to collaborative, and from a concern with competency to that of professional learning
Estrada (2004)[40]	promoting higher levels of a teacher-as-researcher positioning that empowers and encourages beginning teachers
Sivadge (2005)[41]	positive changes in teaching practices as perceived by teachers
Denny (2005)[42]	faster teaching skill development
Di Giovanni (2006)[43]	an enhancement in the instructors' teaching practices
Bilgili (2006)[44]	enabling participant teachers to bring about change in areas that they believed needed improvement
Gray, Chang and Radloff (2007)[45]	enhancing the scholarship of teaching and learning
Gould (2008)[46]	creating a culture of professional development that was engaging, relevant, and capable of systemic improvement to teaching and learning
Mattes (2008)[47]	motivating teachers to develop their teaching practices
Minis (2009)[48]	promoting and facilitating professional learning communities in schools
Pulido (2011)[49]	• collaboration with colleagues • a self reported positive impact on teaching abilities

4 HYPOTHESIS

There would be a statistically significant difference in the participants' mean scores between the pre- and the post-measurement of teaching skills in favor of the post-measurement.

5 LIMITATIONS

The study was limited to:

- fourth-year EFL student teachers
- the second term of the academic year 2010/2011

6 VARIABLES

This study included one independent variable (action research) as well as one dependent variable (teaching skills). Both variables were operationally defined as follows:

6.1 Action research

Action research is a systematic inquiry conducted by an EFL student teacher in order to understand and improve his/her own teaching practices through: 1) identifying a specific educational problem/question at hand, 2) seeking out the relevant literature in that problem/question, 3) planning a research strategy, 4) collecting data, 5) analyzing data, 6) taking action based on results, and 7) sharing findings.

6.2 Teaching skills

Teaching skills are a group of acts or behaviors used by EFL student teachers to facilitate students' learning directly or indirectly. These skills are divided into three dimensions: planning skills, presentation skills and evaluation skills.

7 METHOD

7.1 Participants

Thirty-three fourth-year EFL student teachers (including 4 males) at the Faculty of Education in Suez during the 2010/2011 academic year participated in the study. All participants spent at least 12 years learning English as a foreign language. They all ranged between 20-24 years of age. Two students did not complete their projects and were thus excluded from the statistical analysis performed on the data.

7.2 Measure

To measure participants' teaching skills, the researcher devised a 46-item observation sheet. The observation sheet consisted of three main dimensions representing the three major teaching skills: planning skills (9 items), presentation skills (31 items), and evaluation skills (6 items). A three-point Likert-type scale was used for weighing each statement (1=rarely; 2=usually; 3= always). A jury of five TEFL specialists reviewed the sheet for face validity. Two judges observed each participant while teaching one model English class and rated his/her performance using the observation sheet. The Pearson Correlation Formula was used to determine the inter-rater reliability of the observation sheet. The correlation coefficient was (0.943).

7.3 Design

The design used in the present study was quasi-experimental. A one-group pretest and posttest design was adopted. Students were pretested on teaching skills before the experiment and then posttested after it. Differences between the two administrations were evaluated.

7.4 Procedures

Participants of the study studied ELT Methodology and were trained as secondary-school teachers during their Teaching Practice. During the first two weeks of the term, participants attended intensive

sessions (within the ELT Methodology course) during which they received a good amount of information about Pedagogical Action Research (What it is, why it should be used by teachers, how it can be implemented, etc.). After these sessions, students initiated their Pedagogical Action Research Projects. Each student had to deliver his/her project to the researcher within 8-10 weeks. These projects were mandatory and were allotted 10 marks. The action research framework adopted in this study was that suggested by Mertler (2006)[50]. Based on this model, participants' Pedagogical Action Research Projects went through the following eight steps:

7.4.1 Identifying and limiting the topic

In this step, participants were working out how they could enhance or extend what was currently happening in their classrooms. Each participant identified a topic/question related to a problem with his/her own teaching, something about which he/she was curious, or even something that piqued his/her interest. That topic/question should have led to a project that was feasible in terms of time, effort, and resources. The researcher's role at this step was guiding participants towards choosing topics/questions that were meaningful and possible to do in the classroom. The identified question should have been something of interest and worth the time and effort that would be spent. Moreover, it should have been something over which the teacher has influence (e. g., it could have been related to the teaching strategies and techniques or the teaching aids used by the teacher). Questions were open ended; i.e., they did not have a simple yes or no answer.

7.4.2 Reviewing the related literature

In this step, each participant reviewed background information on his/her question/problem. Sources of literature included general books on teaching, internet websites, educational databases such as the Educational Resources Information Center (ERIC database), Google Scholar, and the Digital Library (a project initiated in February 2005 in order to provide a large number of databases as well as electronic periodicals, books, and dissertations through the gate on www.eulc.edu.eg). The researcher's role at this step was guiding participants towards selecting trustworthy sources of literature.

7.4.3 Developing a research plan

In this step, participants sought out possible solutions to the problems identified. Each participant put a plan for finding an answer to the question he/she asked. They were also required to justify the particular solutions and means of investigation they have chosen. Each participant decided on a researchable question (for example: What is the effect of using concept maps on the reading comprehension of students in my class?) The researcher's role at this step was helping participants in some aspects that were difficult for them such as forming research questions, selecting a design for the study and controlling extraneous variables.

7.4.4 Implementing the plan and collecting data

In this step, each student teacher implemented the plan he/she developed. (In the example mentioned above, the student teacher measured the reading comprehension of the students in her class and used concept maps in teaching reading to them and then measured their reading comprehension again). Participants also collected data from their students. Data sources were varied and included: test scores, survey results, assignments, teacher evaluations, comments during a class discussion, observations of behaviors, student evaluations of teaching, interviews, portfolios, audio tapes, questionnaires, checklists, videotapes, and samples of student work. Depending on the research question, some participants gathered data about individual students while some gathered data about an entire class. The researcher's role at this step was telling participants about the various sources of collecting data, helping them in finding instruments, and guiding participants to select the data that are most appropriate for the issue being researched.

7.4.5 Analyzing the data

Here, data collected were analyzed to reach results related to the question identified in the first step. Participants analyzed data to assess the effectiveness of the solutions. The researcher's role at this step was helping participants in organizing data in such a way that would help participants identify themes and trends. The researcher also helped participants in the statistical analysis of data.

7.4.6 Developing an action plan

Using the information from the data analysis, each participant designed an action plan that would allow them to make a change. Each action plan was essentially a proposed strategy for implementing the result of the action research project. This result informed the participant's teaching decisions. (In the example above, if the concept maps increased students' reading comprehension, the participant would continue to use it in that teaching context. If it did not, the participant might return to his/her old strategy, or would continue to test new strategies).

7.4.7 Sharing and communicating the results

In this step, each participant shared the findings he/she reached by giving a presentation of his/her action research project. Sometimes the participant answered questions posed by the audience (his/her colleagues) or justified some of his/her choices.

7.4.8 Reflecting on the process

In this step, participants reviewed what had been done, determined its effectiveness, and made decisions about possible revisions for future implementations of the projects.

8 STATISTICAL ANALYSIS

The Teaching Skills Observation Sheet was administered before and after the experiment to determine the extent to which participants exhibited a change in their teaching skills due to the intervention. Pretest and posttest scores were obtained for each participant. A paired sample t test was used to analyze the extent to which there was a statistically significant difference between pretest and posttest mean scores for the addressed variable.

9 RESULTS

Analysis of the collected data revealed significant improvement in teaching skills as measured by the observation sheet between pretest (M= 77.694) and posttest (M= 106.661), t=14.725, p=0.000. Analysis of the data also revealed improved scores in all dimensions of the observation sheet. The paired sample t test revealed a statistically reliable difference between the mean scores of the group in the pre-performance in the planning, presentation and evaluation skills (M=15.387; M=52.097; M=10.210) and in the post-performance on the observation sheet (M=20.790, M=72.000; M=13.871), t=9.534, p=0.000; t=10.494, p=0.000; t=16.989, p=0.000, respectively (see Table 2).

Table 2. Differences between the Pre- and Post-Measurement of Teaching Skills

Skill	Pretest		Posttest		t	Significance
	Mean	SD.	Mean	SD.		
Planning	15.387	2.287	20.790	3.547	9.534	0.000
Presentation	52.097	8.825	72.000	12.561	10.494	0.000
Evaluation	10.210	2.044	13.871	1.770	16.989	0.000
Total	77.694	10.476	106.661	14.109	14.725	0.000

10 CONCLUSION

From the results of the present study, the researcher concluded that pedagogical action research projects improved EFL student teachers' teaching skills.

11 DISCUSSION

The result of the present study indicated that participants of the study achieved significant improvements in teaching skills due to using Pedagogical Action Research Projects. A possible explanation is that engaging in the stages of action research enabled participants to enhance their teaching skills. For example, during action research, participants reviewed literature related to the problems they identified with their teaching. This might have enabled them to make data-driven decisions that impacted their teaching practices. In this study, each participant designed a study, collected data, and became a decision maker. This might have led to empowering them. Such teacher empowerment could have helped participants to improve their teaching skills. This explanation is confirmed by many researchers (e.g., Auger & Wideman, 2000[51]; Ferrance, 2000[10]; Parsons & Brown, 2002[52]) who believe that teachers who adopt an action research teaching stance, routinely seek ways to improve their educational practice.

Another explanation for the result of the present study is that Pedagogical Action Research Projects might have helped in narrowing the gap between theory (what student teachers studied in the ELT Methodology course) and practice (what they did in the Teaching Practice). Integrating the two courses through Pedagogical Action Research Projects with their emphasis on reflection and inquiry for the purpose of taking positive action (Stevens & Kitchen, 2005)[53] might have helped students to improve their teaching skills.

Pedagogical Action Research Projects can be important means of professional development through which teachers can enhance their teaching skills. However, the use of Action Research Projects in this study had some constraints. The first constraint is the amount of time needed to plan and implement an Action Research Project, especially the time needed for using new teaching techniques and strategies. This constraint was confirmed by some research studies (e. g., Auger & Wideman, 2000[51]; Johnson & Button, 2000[54]; O'Connor, Greene & Anderson, 2006[55]) where participants perceived the action research process as time-consuming and overwhelming.

Another constraint was the lack of research experience. As far as the researcher knows, none of the participants played the role of a researcher before. Issues such as identifying a research problem, collecting data, or carrying out statistical analysis were new to them. Some research skills might have best been developed before the research started in a focused workshop environment. However, the support offered by the researcher at every step in the projects helped them in overcoming this barrier.

12 RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The researcher recommends that:

- Pedagogical Action Research be taught to student teachers in Methodology courses.
- Both preservice and in-service teacher education programs be responsive to everyday practices and to problems usually faced by teachers in classrooms.
- There be a link between the theories, strategies and techniques student teachers study at faculties of Education and their Teaching Practice.

Further research is needed to examine:

- The impact of Pedagogical Action Research Projects done by EFL teachers on the achievement of their learners.
- The attitude of both preservice and in-service teachers towards using Pedagogical Action Research Projects.

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