



The Role of Teacher Education in Introducing Action Research into the Education System: A Case Study of an Education College

Orly Sela and Miriam Harel
Oranim Academic College of Education, Israel

The study presents a case of a teacher education college which took upon itself the role of providing teachers with an opportunity to study their work as part of their professional development studies in three different frameworks. The objective of the study was to examine the role of the college as promoting research carried out by practicing teachers regarding their own work, from the teachers' point of view. In all three frameworks the teachers had to conduct a study of their own work, following which they were asked to write a reflective text regarding the research process. These texts were analyzed using the grounded theory approach, resulting in three major categories. In-depth examination of the categories led to insights related to the responsibility academia can and should take upon itself in assisting teachers in developing their abilities to combine practice and theory and evolve from knowledge consumers to knowledge creators.

Keywords: action research, teacher education, professional development, qualitative research, grounded theory

Over the past two decades, research done by teachers has taken quite a meaningful place in educational research (Clarke & Erickson, 2006). Lately, more and more teachers have begun to take up research of their own work, thus contributing to the construction of a knowledge base in this domain and the improvement of their own work. Action research has taken a central role in this area, and is perceived as empowering teachers and contributing to their status as professionals (McNiff & Whitehead, 2002). However, practicing teachers still find research to be a complex and difficult task for many reasons. They are not taught how to do academic research, and their working conditions often do not allow them to spend the time, effort and money necessary to engage in it (Reis-Jorge, 2007). The present study describes the case of a teacher education college which took upon itself to act in this direction, with the outcomes specifying the action which needs to be taken by the colleges in order to improve the situation.

Literature Review

Teachers' Research

For the past 15 years or so the focus of educational research has been directed more and more towards research done by teachers examining their own work (Clark & Erickson, 2006). This trend originates in the understanding that teachers' voices and the questions that concern them need to be heard in the context of research on teaching (Cochran-Smith & Lytle, 1992).

Cochran-Smith and Lytle (1999) relate to this perception which has become prevalent over the past few years as a movement rather than a temporary fashion in education. Within this movement they identify several central trends: more and more studies are carried out on topics of teacher education, professional development and educational change; theories regarding teachers' research are developing within a conceptual framework; teachers' studies are disseminated beyond local contexts; and some teachers' studies affect different aspects of academic culture.

Some theoreticians claim that the central problem of educational research is its relatively minor influence on educational practice (Shkedi, 2000; Tamir,

1991). Academic educational research does not usually stem from practice, and it is researchers rather than practitioners who determine its content. There is a gap between researchers and practitioners, as the latter often feel that educational research is irrelevant outside of academia and does not contribute to improvement of education in schools (Hargreaves, 1996). In other words, practice and theory are perceived as two separate worlds (Gomm & Hammersley, 2002). Zeichner (2007) also describes this gap, calling for the use of self-study (including action research, which he positions as a type of self-study) in bridging it.

At the same time the perception of research and teaching as two inseparable domains is growing stronger, placing the teacher-as-researcher concept at the core of the teaching profession, positioning it as a powerful tool for understanding classroom reality. Teacher-led research creates potent knowledge and is used to differentiate between teaching as a profession and teaching as a technical skill (Clark & Erickson, 2006; Darling-Hammond & Baratz-Snowden, 2005). The combination of these two domains – research and practice, is necessary both for academia and for classroom practice (Alpert & Kfir, 2003). Teaching is perceived as a domain where practice and theory both feed and lean on each other (Maaranen & Krokfors, 2008; Silberstein, 1998). According to this perception teachers at all levels and at all stages of professional development – pre-service teachers, practicing teachers and teacher educators, are expected to carry out research, defined in the literature as inquiry carried out in a manner that is “... systematic, public, voluntary, ethical and contextual” (McLean & Mohr, 1999, p. 23). The idea is that teachers themselves can make a meaningful contribution to the creation of knowledge and not only to its implementation when created by others (DeLong, 2004). Today we expect teachers to be more than merely a source of knowledge for their pupils; they must carry out systematic reflection and research which will guide their classroom practice (Hahs-Vaughn & Yanowitz, 2009).

Much of the teacher education literature relates to pre-service teachers as researchers examining their own work. The assumption is that experience in implementing teaching strategies is not sufficient for the pre-service teacher to become familiar with the complex, vague and dilemma-filled character of the teaching profession. Sim (2006) deals with the importance of constructing a ‘community of practice’ where pre-service teachers are afforded the opportunity to research and analyze the complex situations which contribute to effective teaching and learning. She feels that teacher education institutions should be committed to assisting pre-service teachers to develop as professionals who are able to engage in critical analysis and value the connection between theory and classroom practice. One of the purposes of teacher education is to develop in its graduates the confidence and

the ability to research their work and contribute knowledge to the field of education. In addition, conducting research may help pre-service teachers deal with the previous perceptions which they have brought with them to the teacher education process (Darling-Hammond & Baratz-Snowden, 2005). This approach demands that teacher educators trust the pre-service teachers’ ability to accept more responsibility for their own learning (Loughran, 2004).

Belanger (1992) feels that the contribution of research done by teachers is multidimensional: politically it is a powerful teacher empowerment tool, practically it places teachers in the best position for ascertaining what the most effective teaching methods are, and professionally it helps teachers grow as reflective practitioners controlling their own learning. Hahs-Vaughn and Yanowitz (2009) summarize the findings of many studies regarding the extremely positive effects of teacher research on teachers, and English (2006) presents teachers’ research as a way in which we can get ‘inside information’ regarding the educational field, which she feels is sorely missing today.

In addition, teachers’ studies are perceived as contributing to teachers’ professional development in a meaningful manner. Kincheloe (2003) claims that only through engaging in complex critical research, will teachers rediscover their professional status and improve the quality of their classroom teaching. At the same time teachers are enlarging the scope of their professional development and can later on in their professional careers serve as educational leaders and researchers (Diezmann, 2005).

Action Research

Action research is described as a type of teacher research conducted by professionals in order to investigate a problem in their work (Crockett, 2006; McNiff & Whitehead, 2002; Zeichner & Noffke, 2001). This type of research was first discussed by Kurt Lewin in the 1940’s. Lewin, who was a social psychologist, came up with the idea as a way through which different groups of people could resolve their disagreements in a non-violent manner (Zellermayer, 2001). Later on action research was adopted by educational researchers, and has been flourishing in that domain ever since (Huber & Savage, 2009).

The literature describes several ways of categorizing educational action research, but what they all have in common is the view of action research as based on deep reflection and divided into several stages creating a circle or a spiral through which the teachers-researchers examine their work and try to come up with ways of improving it (Foreman-Peck & Murray, 2008; Smith & Sela, 2005). Somekh and Zeichner (2009) did a meta-analysis of 46 action research studies published between 2002 and 2008, dividing them into five types – (a) action research in times of political upheaval and transition, (b)

action research as a state sponsored means of reforming schooling, (c) co-option of action research by Western governments and school systems to control teachers, (d) action research as a university-led reform movement, and (e) action research as a locally sponsored systemic reform sustained over time. The fourth type, action research as a university-led reform movement, relates to cases where a higher education institution initiated an action research project within the local education system in order to improve it, sometimes (but not always) based on a social-political background. This is done through professional development courses for teachers, school-university ties, or groups of teachers who study towards a graduate degree while continuing to teach.

Delong (2004) describes five aspects through which action research contributes to the education system: (a) benefit to the pupils, who are the main reason for conducting action research, (b) benefit to the teachers who gain confidence regarding their knowledge and ways of acting in their classes, (c) benefit to the school as an institution adopting the culture of inquiry where the knowledge, skills and values of pupils, teachers and parents are evaluated, (d) benefit to the education system which develops a commitment to ongoing change processes, and (e) benefit to teaching as a profession. The bodies of knowledge created through action research studies give teachers a voice, which previously had often been silenced, taken over by academia, by the educational establishment or by political leadership. Foreman-Peck and Murray (2008) describe a wide-scoped action research project conducted in Great Britain which found the following benefits for teachers: (a) improvement of creativity in teaching, (b) more willingness to use professional judgment and a better ability to self-criticize, (c) development of a common professional language for all people conducting research, and (d) development of the ability to observe and analyze educational events. In addition, benefits were found for those teachers' pupils, particularly in learning improvement, classroom participation, and transference of learning between classes. However, there were no clear findings regarding the influence of teachers' action research on pupils' achievements in standardized tests. Elsewhere, action research was found to help teachers develop as reflective professionals, able to collect and analyze data (Darling-Hammond & Baratz-Snowden, 2005). It is also at present beginning to enter graduate degree programs in education (Huber & Savage, 2009).

Difficulties and Dilemmas

In addition to the contribution of teacher research to teaching and teachers' professional development, the literature also describes the ensuing difficulties. The most basic difficulty has to do with the fact that teachers' first and central responsibility is to their pupils' achievements and not to research, therefore no resources (time and/or money) are allocated for this purpose (Alpert, 2006).

Teachers continuously study their work in an intuitive manner; they ask themselves questions regarding their work, collect data regarding their pupils through tests, different projects, learning logs, etc., and come to conclusions based on the collected data. The difficulty lies in mobilizing them for systematic research processes (Babkie & Provost, 2004; Goldberg-Kaplan, Alon, & Boltzer, 2003). In order to conduct high level studies one needs to have high level research skills. Teachers often lack the necessary skills to conduct academic research (Diezmann, 2005; Lunenberg & Willemsse, 2006).

Teacher educators also have little experience in conducting research in comparison with their teaching experience (unlike lecturers in other academic domains), which limits their ability to carry out studies of the teacher education process, and perhaps teach their students – the pre-service teachers – how to conduct research appropriately. This situation is beginning to change with the growth in numbers of teacher educators who recognize the value of self-study for the examination of their practice (Heiman, 2004; Loughran et al., 2004; Zeichner, 2007). Pre-service teachers acquire methodological knowledge during their teacher education process or while studying for a graduate degree. As members of a professional community one of the aims of teacher educators is to provide their students with research tools which would assist them in observing their work and as teachers researching their own practice. Regarding teachers in graduate programs, they need the close academic support and guidance of teachers researching their own work. Many of them perceive practice and research as two completely different domains. In order to bridge the gap between these two domains and support their insights regarding the research process they must be allowed to take small, measured steps supported by both academia and the education system (Goldberg-Kaplan, Alon, & Boltzer, 2003).

Another dilemma has to do with publicizing teachers' studies. By its very nature research disseminates new knowledge and exposes itself to critical discussion. Studies conducted by teachers usually remain private and are not exposed to others. This may be a serious limitation, as these studies do not benefit the wider community of academics and practitioners, only the researchers themselves (Diezmann, 2005).

One of the ways of encouraging the use of action research in the education system is through teacher education of all types, both pre-service and in-service (Goldberg-Kaplan, Alon, & Boltzer, 2003). The present study examines a case of a teacher education college which took this task upon itself through three groups of teachers – experienced teachers taking an in-service course, experienced teachers studying towards a graduate degree, and novice teachers in their first year of teaching, i.e. at the end of their pre-service teacher education. These three groups were assigned an action research project as a

major part of their academic assignments, and the study presented here examines the success of this project through a close reading of the teachers' reflective writing.

Research Question: What is the role of the teacher education college in embedding action research in the education system?

The Study

In light of the fact that action research is perceived today as an important topic with the potential for advancing the education system (Foreman-Peck & Murray, 2008; Huber & Savage, 2009; McNiff, 1998), the question remains – how can this be done in practice? One of the possible ways of achieving this aim is through teacher education colleges taking responsibility for this. This is a natural step in light of the role of these institutions as leaders in the field of education, and as the place where theory and practice are bridged (Korthagen, 2001; Sela, 2009).

Two teacher educators in a large teacher education college decided to take this role upon themselves, in recognition of the importance of action research for both teachers and the educational field, and comprehension of the significance of the college as a large body able to assist in initiating change and introducing it into the education system. Both have long term experience in conducting action research themselves and guiding their students in doing so, and believe that it is a powerful tool in furthering the cause of continuing teacher education and teacher empowerment.

Research Method

The study makes use of qualitative methodology which describes and explains phenomena through the participants' eyes (Guba & Lincoln, 1994; Silverman, 2004), using the case study approach. Case study is a research strategy focusing on a specific, defined case; that is – a study describing and interpreting a particular segment of a phenomenon which is identified, defined and examined. The case has borders defined by time, place and participants, allowing one to enter the participants' world and study it in depth (Stake, 1998; Yin, 1994). The present case study examines an intervention program initiated by a teacher education college, during which students/teachers conducted action research projects in the schools they were working at, alone or in collaboration with colleagues.

Three courses using this strategy are discussed in the present study, each numbering 20-30 students:

- a. Practicing teachers taking an in-service course and conducting action research as the main course requirement.
- b. Teachers studying towards an M.Ed. degree taking a Qualitative Research course which includes the option of conducting an action research study as the main course requirement.
- c. Teachers in their first year of teaching, which is also their last year as pre-service students,

conducting action research as the seminar paper requirement for their Educational Seminar course.¹

As can be seen from the list, two of the courses are part of in-service teacher education (with one of them including graduate students), while the third spans both in-service and pre-service teacher education. Thus, the three courses 'cover' the main stages of teaching as described by the life-long learning approach which advocates continuous learning by teachers throughout their careers (Aspin & Chapman, 2000; Day, 1999).

Research Population

The present study included 30 teachers who studied in the three courses described above, 10 teachers in each course. The teachers were selected at random, with no preference regarding gender, ethnicity, age or attitude towards the research topic. Generally speaking, the 30 research participants reflect the teacher population, i.e. a large majority of women and an ethnic division reflecting that of the entire country. While taking these courses they were all working as teachers in varied contexts - schools and kindergartens of different types in the K-12 school system.

Data Collection

The present study makes use of document analysis as a data collection tool. The action research project each teacher conducted included a reflective writing component which encouraged the participants to engage in the three levels of reflection: technical, practical and critical (Van Manen, 1977), while also relating to the emotional aspect of their practice (Korthagen & Vasalos, 2005). The teachers were asked to reflect in writing regarding both the product and all stages of the process (choosing a topic, dealing with the literature, collecting data, analyzing it, coming to conclusions): e.g. what did I think, what did I find difficult, who/what helped me, what is now clearer to me about the research method, etc. The reflective writing texts were collected from 10 teachers in each course at random, i.e. 30 documents altogether. The documents were 1-3 pages long on average.

Data Analysis

The teachers' reflective writing was analyzed using qualitative content analysis (Strauss & Corbin, 1990) at two coding levels – three stages of first level coding and a fourth stage of second level coding, in order to create grounded theory (Charmaz, 2006; Shkedi, 2005). Grounded theory is a central method of data analysis and theory construction in qualitative research. It describes

¹ Unlike most Western countries, in this context pre-service students begin their formal (paid) teaching career in their last year of college. Thus, they spend one full year being both students and teachers.

phenomena and interprets reality from the participants' point of view, thus was considered suitable for the present study. "Grounded theory methods consist of systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories 'grounded' in the data themselves" (Charmaz, 2006, p. 3).

At first each researcher analyzed her own students' writings, and at a later stage the texts and the researchers' analysis of them were integrated into one whole data bank, which both researchers examined and re-examined, attempting to come up with insights regarding the research question.

In the first stage (open coding) each text was read separately and the different analysis units (sentences, paragraphs) were named according to the topics present in the reflective writing texts. This stage provided the researchers with a general orientation regarding the texts' content but also the relationships among them. The categories were collected from all the texts in parallel fashion, with the relationships and hierarchies among the categories and sub-categories exposed. This stage allowed the researchers to perceive a full picture of the data's potential, leading to the third stage (selective/focused coding), where the three main categories were discovered. The fourth stage integrated the findings with the research literature, and an interpretive analysis was conducted to create grounded theory. This analysis assisted the researchers in suggesting ways through which a teacher education college can overcome the difficulties described and effectively introduce action research into the education system.

Research Limitations

As the data collected was taken from a random rather than a representative sample of the texts composed by the participants, it may not be indicative of all the issues teachers are concerned with when conducting research of their own work. The lack of triangulation may also be a potential problem in the present study, forcing the researchers to focus on the participants' words only, without verification from additional sources.

Findings

Content analysis of the reflective writing texts produced three main categories: (a) Motivation for choosing the research topic, (b) Questions and difficulties, and (c) The study's contribution. Despite very rich findings, due to constraints of topic and space we report below only those findings which relate directly to the topic of the present article – the role of the teacher education college in promoting action research in schools. The original research objective was to examine the teachers' point of view regarding their experiences of researching their own work. Following the rich and varied data base the research texts produced, the researchers of the present study realized that one main theme within this data base was the issue of the place and role of academia in furthering the cause of teacher research. The research

question was constructed during the data analysis process, as is characteristic of qualitative research which is non-linear and often changes during the research process (Givton, 2001; Maykut & Morehouse, 1994).

The teachers' reflective texts discussed two basic types of motivation for choosing the research topic, the wish to deal with practical issues in order to improve their work and the wish to deal with issues they find interesting and/or worrying, not necessarily related to their work. The first type of motivation was prominent with all three groups of teachers. Most teachers from each group picked research topics from their daily educational practice, which worried or upset them. However, this was not an easy process. Most often teachers only selected their research topics after much consideration and discussions with the lecturers. The support provided by the lecturers allowed them to come up with appropriate topics, which in turn helped them to use their professional and research-related abilities to the fullest.

We had different opinions and could not agree amongst ourselves, and as a result finished the meeting with no decision. But we all agreed to meet Dr. M. [course lecturer] to consult her on this issue. In a meeting held again at the library we consulted with her, and she led the way and was very helpful in choosing a research topic. (N – integration of a special needs child in a regular class)

I felt very confused and maybe a little helpless, mostly because we were unable to define the research question. I was so relieved when we managed to reach a joint research question which each group member will research from her point of view. Actually, it was the meeting with M [course lecturer] which helped us identify the problem, define it, describe it, and ask the research question. (M – interpersonal communication within the staff)

Most teachers began the research process with concerns, expressing feelings of insecurity and doubt regarding their ability to fulfill the task. In addition to difficulties related to their new roles as researchers, many teachers also found their roles as academics stressful, displaying pressure, panic and much difficulty when first encountering the academic literature. "The most difficult part was trying to find material, which was almost impossible, as my topic is quite esoteric. In the end I managed to find my way around this problem by doing observations and interviews" (A – integrating deaf students into a mainstream class).

The teachers related in their reflective writing to the varied skills needed to write the Literature Review: separating main ideas from supporting details, focusing on the central theme, integrating materials, organizing the information, etc... "The due date came closer and I was still deep in doubt regarding integration of the material. Stuck in the Literature Review. It was frightening. Would I be able to cope?" (T – feedback sessions in guiding an

intern teacher).

Many teachers needed much assistance throughout the project, both academically and in the collection and analysis of data; and they were very pleased to receive this assistance from the course lecturers.

... in a meeting with M [course lecturer] we decided on the stages of the study and the number of observations based on the research needs. M gave us her opinion regarding the observations we had already done... the action plan was constructed according to the research needs... M recommended we cut out the last two points on the first observation page and use them in the second observation stage... at last I felt the research was taking shape. (M – interpersonal communication within the staff)

D, who researched her own personal narrative, emphasized her need for intensive guidance both within the group and personally, in her quest to acquire the skills necessary for data analysis, and the satisfaction she felt when receiving this support:

...that's why what we learned in the course matched my needs so perfectly. Finally I was exposed to how data should be presented. I heard in class what others have done with their research materials, now I had to do something with mine. Here the lecturer came to my aid, and in a personal meeting helped me to stop worrying about the materials. She demonstrated how I should work with interviews and observations, and I continued from there.

Many of the students reported different types of difficulties relating to acting as researchers within their own schools. For example, the teachers who studied their colleagues' work rather than their own found it difficult to recruit colleagues who would agree to be observed and interviewed, due to fear of exposure.

One of the difficulties I faced was that the Sports teacher did not cooperate at the beginning of the interview, saying: 'Are you criticizing my work?' He was closed-mouthed. But happily he agreed to cooperate once I explained that I was conducting research as part of my M.Ed. studies, and that the work was for me only. (V – the place of school breaks)

Some teachers who needed their school's support discovered to their surprise that it was not forthcoming. T, who studied an empowerment project of new immigrant youth, described the opposition he encountered:

From the minute I decided to begin the exploratory process I encountered the project leader's cool reaction. She claimed that the group is in a vulnerable place and she doesn't feel this should be exacerbated by a foreign element whose presence might raise suspicions.

The study only began when T managed to convince the leader that the study might become useful, having consulted the course lecturer as to the best way in which this can be done.

Luckily the project leader knew me from a time when we had worked together as counselors in the same school, thus I was able to convince her of the study's importance and the fact that it will do no harm and might even do some good.

Throughout the process the teachers described the difficulty of integrating research with their professional commitments at school. "During the writing process we had ups and downs. We were tired and sometimes despaired – there was pressure to complete school tasks, personal tasks, and the action research tasks" (N – mainstreaming). The lecturers were always sensitive to these difficulties, allowing for delayed deadlines when necessary. While these difficulties, as well as many others not reported here, did hinder the participants' research efforts, the data analysis also shows that teachers from all three groups were keenly aware of the great contribution the study made to them at both the personal and professional levels. Clearly they had learned much, not only in the specific subject area they had researched but also regarding ways of working, relating to others and personal growth.

I discovered that action research caused a fundamental change in my professional development process. I felt I had made a real change: I examined myself, understood what I had to change, and improved my feedback sessions with my colleagues. I felt relief and appreciation of the necessary change I had made. (P – giving feedback within a staff)

For example, some of the teachers were happy to see that their research project directly contributed towards a solution, even if only a partial one, to a problem they had been suffering from for a while. In addition, the fact that other teachers may enjoy their research was perceived as extremely meaningful.

This research project helped me achieve deep comprehension of a problem I had encountered professionally and did not have the tools to solve or even understand properly. I learned how to turn the idea of change into a more pleasant and less threatening experience... Its importance is more than just as a course paper, but with the usefulness the study may bring to readers in general and teachers particularly regarding dealing with changes more effectively. Allow other teachers to learn more about the process of accepting changes in methodology. (L – teachers' perceptions regarding changes in teaching methodology)

Many teachers were favorably surprised by the relevance of the professional literature they had read during the research process, both for their study and for

their work in the field. They discovered how important these reading were, and were very grateful to the lecturers for leading them in this direction. "I believe in what the literature says. Sometimes I felt it was very irrational, but then surprisingly many things the literature offered were actually quite helpful" (R - dealing with classroom management issues). An important issue mentioned was the support of the school establishment. The few teachers who asked for and received this felt it was very important, both practically and motivationally.

The principal was a full partner and allotted resources for the research, and the educational counselor who was an integral part of the educational staff often gave her opinion regarding important issues which contributed to the action research process. Without this cooperation it's hard to conduct a study in school. Without the cooperation of the leading elements in school you cannot teach, do research and make a difference. (L - mainstreaming in the Arab sector)

In one of the courses the teachers presented their studies to the group, sharing the knowledge they had gained during the process. These presentations, which were often accompanied by many fears and close guidance by the lecturer, brought about feelings of satisfaction, growth and pride.

Presenting my action research today makes me feel proud, as I am realizing my potential. I am actually doing this. It is not only my student who has developed as a self-directed learner, I did too, and maybe the audience as well! (N - student guidance)

A, who studied English teachers' perceptions of vocabulary teaching, related to the importance of publication and dissemination of the research findings.

In my opinion, many teachers would be happy to discover which techniques are useful and efficient in teaching vocabulary. These findings can help me as an English teacher, and maybe others as well. If I can share my insights following the research...

L, a teacher counselor, studied teachers' perceptions regarding changes in teaching methods. She also felt that there is a need for dissemination of knowledge gained through her action research project. "...the importance of this study is not only as a course paper, but in its usefulness to readers in general who wish to know more about the process of accepting changes in the education system..." Quite noticeably, in their reflective writing the teachers discussed the study they had conducted as 'an appetizer' for continued learning and researching in different frameworks. "The process I have undergone while conducting my research has shown me that in case further learning problems arise I can always research them and find remedies accordingly" (N - improving students' reading skills).

Discussion

Over the past two decades the professional

literature has engaged in intensive discussion of teachers researching their own work, particularly emphasizing the contribution of this type of research to the teachers themselves, the educational field, and educational research in general. Teachers researching their own work widen their knowledge of education and develop both personally and professionally (Hans-Vaughn & Yanowitz, 2009; Zeichner & Klehr, 1999). The educational field benefits from the fact that teachers become more professional and their work is based on self-study and action research rather than on intuition alone (DeLong, 2004); and educational research benefits from the unique knowledge created by teacher-conducted research (Clark & Erickson, 2006), perceived today as necessary for the integration between academia and the educational field (Mertler, 2006; Mertler & Charles, 2005; Postholm, 2008).

The present study describes a case in which a teacher education college took upon itself the role of encouraging the use of action research in the education system by intentional use of it as the main course assignment in three courses for practicing teachers at different stages of their professional careers. Analysis of the reflective texts written by the participants while conducting action research and after the completion of the process shows that they gained much from the research process, but also encountered quite a few difficulties and problems. It is important to note at this point that the data analysis of the texts used for the present study can be read as leading in several different directions. We have chosen to follow it in the direction of discussing the role of the teacher education college as leader of the 'teacher as researcher' notion, through deliberate action in both pre-service and in-service teacher education. Choosing which theme to follow of all the themes emerging from the texts during the data analysis process is described by Givton (2001) as a choice to be made during the research process rather than prior to it, as is the practice in quantitative research.

According to the findings of the present study action research does, indeed, contribute to the teachers themselves, the educational field, and educational research in general. As can be seen in the Findings section, the participants reported new insights they had come to as a result of doing action research, at both the personal and the professional level. For example, S, who researched improvement of interpersonal communication, says: "This intervention brought about only good things, mostly a tool for the planning of behavior modification, which benefitted teachers, pupils and parents. This tool was so successful that other teachers adopted it as well."

These findings match those described in the literature regarding the collaborative discourse taking place among the teachers who share amongst themselves insights and practical ideas regarding problems they face on a daily basis, but do not base this discourse on

theoretical knowledge (Postholm, 2008). Most teachers in the present study reported feelings of personal and professional satisfaction and success, as well as expressing hope that they will be given an opportunity to continue conducting research while engaging in educational practice. This is echoed in L's words: "This research project helped me achieve deep comprehension of a problem I had encountered professionally...it may allow other teachers to learn more about the process of accepting changes in methodology..." These findings are also supported by the relevant literature (e.g. Zeichner & Klehr, 1999).

Another very important point emphasized by the participants was the enormous amount of help they received from the course lecturers, without which they could not have completed the action research project successfully. This is clearly echoed in several of the quotes presented in the Findings section. However, despite the general agreement that teacher research has much to contribute to all concerned, it has not become prevalent in the educational field, and teachers who attempt to engage in it face serious difficulties. They are unskilled and untrained in conducting research; they are often faced with opposition to change and an unwillingness to admit the existence of problems; and the educational establishment does not allot sufficient resources (time and money) for this purpose, as it believes that teachers should teach rather than do research (Alpert, 2006; Ary et al., 2009). As M, who studied teacher feedback, said:

The more I related to the writings [literature review], the more frustrated I became. This frustration was due to lack of time. I began to carry out the action research, and the teachers were under pressure to teach the material, meet standards, prepare for national exams, etc. Thus, the conditions allowed me to carry out only a minimal plan.

The present study describes an attempt to change this less than desirable situation by positioning the teacher education college in an active role of initiating and encouraging an educational change. As Somekh and Zeichner discuss in their article from 2009, university-led reform movement is a recognized 'variation' within the field of educational action research, and the action the teacher education college took, described in this article, positions it as part of this 'variation'. Higher education institutions turning in this direction see their role not only as teaching and conducting research, but also as having a social role and leading change in society in general and in the education system specifically. In order to realize its active role, the college used action research as the course assignment in several courses catering to teachers at different stages of their professional careers, with the hope of making action research part of the regular 'tool box' of all experienced teachers. In light of the

study's findings we feel this direction of positioning teacher education colleges as supporters of educational action research should be strengthened.

Teachers work in a demanding environment, within a complex, vague, dilemma-filled situation, in which they come up against practical problems, considerations and questions, and are expected to make decisions on a daily basis (Calderhead, 1995). The regular in-service courses the system provides are perceived as keeping the teachers updated regarding news and innovations and providing practical 'tips' given by experts. In order for the teachers to integrate research into their work, a fundamental change needs to take place in their learning culture related to the character of the research process – a move towards a culture of systematic, structured, on-going, process-based learning, not necessarily a linear one (Zeichner, 2007). The teachers who participated in the present study described coming up against many difficulties in their effort to integrate the study and all it entailed within the school environment, mainly due to the fact that it was so unusual within school culture. Lack of support from peers and principals also hindered their progress as novice researchers.

We feel conducting research should become part of the teachers' learning culture, beginning with pre-service teacher education and throughout their professional careers. This does not mean more courses need to be added. It is possible to use existing courses and designate action research studies as their main course evaluation projects. Teachers who have acquired research skills and gained experience in conducting research during the teacher education process will bring their positive stance regarding the theoretical literature to their work, will be equipped with the necessary knowledge to conduct a study, and will have fewer fears, thus being in a better position to implement their research abilities. Conducting a study will no longer be a college or university one-off episode, and they will be able to become a leading force in this regard in their schools, together with teachers who have graduate school experience, including doing research. The participants of the present study reported that having done research, they did, indeed, see themselves as leading additional studies in their schools. As N put it, "The process I have undergone while conducting my research has shown me that in case further learning problems arise I can always research them and find remedies accordingly." This finding strengthens the claim that teachers who experience this are often interested in continuing to integrate research into their work in the future. Postholm (2009), who led research processes in a Norwegian school in his position as an academic in a similar manner to the present study, describes how the teachers in the school expressed a wish to continue conducting research after he had left. His conclusion was: "...teachers can

develop a research stance, meaning a disposition to examine one's practice critically and systematically" (Postholm, 2009, p. 563).

Thus, teachers will become change agents in their own schools, bringing in the idea of action research and leading groups of teachers wishing to try out this 'new' idea. Today, the most common model in using action research in organizations (both in business and in education) is that of external researchers from academia, called 'outside agents' (Coghlan, 2004). These academics come to the field, guide the school staff in the research process, and lead the change as external researchers (Dickson & Green, 2001).

In the present study we present an alternative model, one in which the active change agents in the schools are the teachers themselves, i.e. selected staff members act as 'insider action researchers' (Coghlan & Brannick, 2005, p. 61). They receive their training as researchers in academia and lead the research in the organization while being supervised themselves by academics. They become 'practitioner-scholars', influencing the construction of knowledge in the organization over time (Sarah & Haslet, 2007). Our recommendation is that the emphasis in the school be gradually shifted from external experts to internal ones from amongst the school staff, which Lieberman and Pointer-Mace (2009) call 'accomplished teachers' acting within professional learning communities. These are teachers who possess the ability to study practice seriously, comprehend its complexity and the meaning of exposing the product of their learning to others, and mobilize colleagues towards collaborative inquiry and learning activities.

This is precisely the place of the teacher education college, whose role it is to assist the teachers in the field move from the role of practitioners who implement the knowledge they had learned from academics to that of practitioner-scholars who help bridge the gap between theory and practice, exactly as action research does, as its name clearly implies. The college can and should make teachers acquainted with research as it is reflected in action research which is considered 'teacher-friendly', guiding and supporting them stage by stage as they conduct their first study. At the end of the process, assuming it is as positive as it was for the participants of the present study, the college should not leave things as they are, but rather discuss with the teachers how they can pass on the knowledge they had gained regarding research to their colleagues in school, thus becoming change agents in the area of teacher research.

In order for the knowledge constructed following the studies to be able to do more than remain between the four walls of the school, become exposed to critical discussion and benefit a wider community, different frameworks of meetings, conferences and study days need to be established, allowing an educational-research

dialogue to take place, side by side with publication in hard copy and online journals which teachers are exposed to (Zeichner, 2007). In addition to the professional benefit these studies will bring, each in its own domain, teachers will thus be exposed to their colleagues who have successfully conducted research, and gain the confidence necessary to also engage in the research process. The Findings section above demonstrates that the participants in the present study clearly stated their wish to do so as well as their great satisfaction with the publicizing of the study, even if only within the academic course community.

The teacher education college needs to lead this process of knowledge publication, as the teacher educators in the college are routinely engaged in academic publication (Smith, 2005) and are skilled at it, while school teachers do not generally publish the knowledge they had accumulated. The recognition that this knowledge is worthy of publication and dissemination amongst the academic and professional community is one of the topics the college must promote, mostly through active practical action – setting up study days for teachers and academics together where both present their research, and initiating suitable publication outlets such as journals, collections of articles in book form, etc. This movement from the personal to the public is a necessary one, if we expect action research to be taken seriously by both the academic community and the political establishment (Zeichner, 2007).

While we feel very strongly about the premise presented in this article – that teacher education colleges should take an active role in changing the educational landscape through initiating and encouraging practicing teachers to conduct action research projects regarding their own work, we recognize that the evidence presented in the present study only partially supports this premise. We have shown earlier in the Discussion section how the teachers' words have led us in this direction, at times directly and at times in a roundabout manner. A follow-up study might investigate this issue from the college's point of view, interviewing college staff in an attempt to understand their point of view in this matter. Another possibility for a follow-up study would be to examine the school's point of view, attempting to discover how principals and other school personnel view the possibility of making action research a meaningful part of the education system.

Conclusion

Inviting and encouraging teachers to conduct studies regarding their own work as part of their ongoing professional development is a topic which has become central in educational academic discussions, and somewhat more slowly in the education system itself. The recognition that teacher research assists teachers in changing from passive consumers of theory created by others into professionals creating complex, varied and

dynamic knowledge of their own, integrating theory and practice, is becoming more and more acceptable by academics and at a much slower pace by teachers themselves. The study described in this article demonstrates how action taken by a teacher education college may contribute towards change in the education system. By bridging the gap between theory and practice the colleges may make a meaningful contribution to the education system instead of remaining in the academic ivory tower.

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Author Notes

Dr. Orly Sela
Oranim Academic College of Education, Israel
9 Nurit St., Metulla, 10292, Israel
orlysele@oranim.ac.il

A lecturer and teacher educator at an academic teacher education college. Head of the Practical Final Paper Division of the MEd program and Head of the Promotion of Excellence in Teaching Unit. Received her PhD from Haifa University. Research interests include action research, TEFL and online teaching and learning.

Dr. Miriam (Miri) Harel
Oranim Academic College of Education, Israel
19 Sold St., Kiryat Bialik, 2738, Israel
miriharel100@gmail.com

A lecturer at the Faculty of Education and the MEd program, and a pedagogical advisor in an academic teacher education college. Received a PhD degree from the School of Education at the Hebrew University in Jerusalem. Research interests include teachers' knowledge, teacher as researcher, professional ethics and novice teachers.



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