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How to teach the art of “doing” research: Lessons learnt from teacher education program in Pakistan

Nilofar Vazir
Aga Khan University, Institute for Educational Development, Karachi

Rashida Qureshi
Aga Khan University, Institute for Educational Development, Karachi

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25 How to Teach the Art of ‘Doing’ Research: Lessons Learnt from Teacher Education Programme in Pakistan

NILOFAR VAZIR & RASHIDA QURESHI

Introduction

Constructivist philosophy and teaching dominates the educational landscape at the Aga Khan University Institute for Educational Development (AKU-IED). Research reveals that teaching and learning strategies guided by constructivist philosophy are more effective in enhancing students’ learning outcomes than traditional (rote learning) approaches. At AKU-IED, we as teachers of the Educational Research Methods course believe that all students come to our classrooms with prior knowledge, which should be acknowledged and respected. An instructor should push the boundaries of students’ existing knowledge to a deeper level by entering into a participative process of knowledge construction as a facilitator rather than acting as an expert transmitting knowledge to students. New knowledge is then produced through student and facilitator interactions rather than a dumping of information onto students as if they were empty vessels (Steven, 2002).

The interactive learning process affirms two principles. Firstly, knowledge is actively constructed by learners rather than transmitted by teachers. Secondly, new knowledge is constructed on the foundations of students’ existing knowledge (Galeen, 2006). This qualifies constructivist classrooms as learner-centered as these “include more of a focus on student variables and learning processes as critical to positive student outcome” (White, 2007:113).

This document reports how we, as teacher-educators, attempted to create a learner-centered classroom for a non-traditional batch of students enrolled in an educational research course for their Master of Education (MEd) program. We have highlighted the challenges we encountered, and the successes we celebrated as we played our role in preparing students as researchers. The purpose of sharing these problems and potentials is to highlight that research, particularly emerging from classrooms, continues to remain an area yet to be fully comprehended and explored in Pakistan. Teaching students how to undertake research so that they learn the art of performing research is a topic seldom explored and shared with Pakistani educators. They are generally unaware of the rigor each step in the research process involves for both learners and teachers. We have attempted to redress this situation by documenting and sharing a research study based on our own teaching methods of an educational research course to enhance students’ skills and knowledge for conducting research.

Background and Context of the Study

The study is set in Karachi, Pakistan at the Aga Khan University Institute for Educational Development (AKU-IED). The practices of teaching and learning at AKU-IED are informed by the philosophy of constructivism where students are expected to participate actively through collaborative discussions, reading and critiquing academic writing and presentations based on readings. Strategies and approaches include practical work, pairings, presentations, small group tasks, and in- and out-of-class assignments and other activities to help students develop and consolidate their knowledge of course content while working alone or with colleagues. Students enrolled in the Master of Education program are expected to be “exemplary teachers, leaders and researchers” (M.Ed Handbook, 2006-2008) upon the conclusion of their studies. Yet, producing exemplary researchers is a challenge faced by AKU-IED. In Pakistan,
research culture, by and large, is weak, and the term ‘research’ is not well understood by many in educational settings.

AKU-IED recognizes the significance of research for improving the standards of education in the country, and since its inception in 1993, has included two core courses called Educational Research Methods for the Master of Education (MEd) program. To qualify for a M.Ed. degree, students are also required to write a research report based on an educational project or a dissertation reporting a research study carried out in an educational setting. The attempts to incorporate increased research education and practice, however, are met with socio-cultural barriers. AKU-IED’s programs are geared to providing continuous professional development to in-service practitioners. These practitioners, as we define them, are non-traditional students who mainly come from an education-related profession, and can include school teachers, head teachers, principals, coordinators, education managers and officers. A significant majority of these practitioners come from rural areas and most of them have family responsibilities. When admitted to AKU-IED, they return to a formal education scenario after a considerable time lapse. Most students demonstrate appropriate content knowledge in their subject discipline, but possess inadequate theoretical understanding of research. The lack of research knowledge may be attributable to their academic training, which is deeply rooted in an exam-oriented culture and embedded in a lecture mode of teaching, fostering rote memorization.

In Pakistan, teachers and textbooks are generally considered a legitimate authority that is seldom questioned or challenged. The dependency culture based on instructors and textbooks inhibits students from exploring, dialoguing or making critical arguments beyond textual information. Most students rarely read beyond prescribed textbooks or curriculum, and seldom develop a habit of reading and/or reading critically. The result is a superficial academic reading that bars in-depth conceptual understanding of the topic which, in turn, retards the connectional understanding of the text, and often leads to gaps in knowledge acquired from research text, literature or theory. Moreover, few students have practical research experiences. Hence, their capacity to apply their conceptual understanding of academic readings to real-life situations is extremely compromised.

Another issue is the language of instruction. English, which is usually the second language for most faculty members, can be the third, fourth or even fifth language for most students. Hence, students come with varying degrees of fluency and comprehension in English (Shamim and Qureshi, 2007), which affects effective communication and documentation during the research process.

The focus of this research study is the teaching and learning in one classroom at AKU-IED. The purpose of the research was to explore ways in which the teaching of a research course can be improved upon for enhanced student learning. The research question was, “How can we improve our teaching of research to graduate students enrolled in the Master of Education program for the academic year 2007-2008?” Our research participants were 40 graduate students registered in one of the Educational Research Methods courses.

Methodology

Action research was used to address the research question. The following diagram adopted from “Problem solving research/action research” at the University College Dublin Centre for Teaching and Learning explains the process followed for conducting the research.
Figure 1: The Action Research Spiral Adopted from http://www.actionresearch.net

Our planning for the research study coincides with planning for the research course, which serves as the backdrop for this study. For improving students learning of research we gathered their past learning experiences. This helped us plan our action for teaching the research course, in accordance with the constructivist philosophy. We understood that by applying the four Es – elicit, extend, explain and expand - both teachers and students would be equally involved in the knowledge construction process, and build new meanings through interaction with each other over time.

According to Morphew (2000), the constructivist teaching and learning “includes planning, implementing and evaluating the curriculum or the material covered in scope and sequence” (p. 4). Hence, building on the synergy between action research and the constructivist approach, we planned the research course material, its scope and sequence. We used an eight stage research process to organize our course curricula (see Figure 2 below). However, unlike Morphew’s (2000) evaluative mode, ours was more reflective in nature like Rettalliek’s (2004) because we were also looking for ways that would help improve students’ conceptual learning and understanding of the course material.

While planning for the course, we took into account a number of factors. First, in order to select the material in terms of its level, scope and coverage, we used students’ evaluations and feedback of previously taught research courses. This served as a precursor to the academic practice of undertaking research. Second, we also used our own observations, faculty team reflections of other research-focused courses and a critical review of students’ assessment tasks. We carefully and consciously weaved in the ingredients of effective teaching in our planning, observation, implementation, reflection and re-planning, thus, making concerted efforts to address the students’ apprehensions, fears and hopes in their future research initiatives while incorporating our own insights.

The above process served a dual role. While we were evaluating our own practices and roles as facilitators of the course content in previous courses, we were also evaluating students’ performances in
other courses as a product of prior teaching and learning. We designed and planned our content and material as per scope and sequence, and implemented instructional strategies according to students' needs and situations. For example, the reading pack consisted of mandatory and optional readings intended to be covered within a stipulated timeframe and order.

Another factor considered during the course planning phase was students' earlier exposure to research, and the backgrounds that shaped their experiences which they brought to the classroom. Through our interactions and experiences of teaching we recognized that most students had inadequate practical knowledge of research. Consequently, students had limited capacity for applying their conceptual understanding gained from academic readings to real life situation or contexts. Our course, offered in the first semester of the program, was their first formal exposure to educational research. As facilitators, therefore, our planning for every session of the course was not a singular stage with definite starting and ending points. Rather, it was a continuous process. It was the flexibility of the action research design that allowed us to act in response to the emerging needs of the students. At times when we felt that students were not responding well to the pre-planned activities we readjusted our course material, its delivery and assessment of outcomes accordingly. We planned each course beforehand, implemented that planning and observed while reflecting continuously on how students were responding.

The flexibility of action research also allowed us to assess the outcomes of our teaching and students' learning both formally and informally because for every session of the course that we taught over the period of sixteen weeks (excluding a two week break), we went through the cyclic motions of action, observation, reflection, planning and action.

![Figure 2: Implementation of the Research Course](image-url)
What follows next is the topic-wise discussion of the teaching strategies and the expected learning outcomes.

I) Preparation for Research

The course content included nature and notion of qualitative research, research context, and research reading and writing. The first two weeks were allocated for research reading and writing. The objective was to introduce concepts that form the foundation of qualitative research. To a majority of students, these were new terms. Therefore, the teaching strategies chosen were more group oriented. For instance, students brainstormed on the question “What is research?” Although the resulting shell of a research process was not very different from our expectations given students’ limited knowledge and understanding of research, the class discussion brought students’ previous knowledge and experiences to the forefront. The latter was the main purpose of using these teaching techniques. Fosnot (1996) states that adults learn better when their previous knowledge is used as a building block for constructing new knowledge. Similarly, students were asked to observe the interaction patterns on campus in small groups to places which were frequented by them. For instance, one group occupied a library corner while another, the courtyard. Upon returning to the classroom, students had two to four pages of observational notes, which informed the subsequent class discussion about the what, why and how of their observations as well as how they felt during the observation process.

With references from the pre-assigned readings for these weeks, we discussed various concepts like the purpose of research, the research field, how information from the field is collected, and so forth. Although the actual theory and underpinnings of the observation mode were discussed much later in the course, our purpose here was to make students realize that familiar places could become unfamiliar as one enters as a researcher. One, then, has to go beyond the phenomena, occurrences or situations that would otherwise be taken for granted.

Preparation for the research phase also included familiarizing students to research-based academic writing. Therefore, we chose a cooperative-learning group strategy (Johnson & Johnson, 1994; Slavin, 1991) for reading-based discussions. Students were divided into two large groups. They were given two research articles with guiding questions the day prior. We expected students to read the articles individually before class. In class, each group was further divided into two groups and organized for a separate structured discussion. We requested two colleagues to facilitate the discussion. Each group discussed the article before being put into smaller groups of fours, where two students had the first article and two others had the second article. Once the whole class had relevant information about both the articles, students were given two questions per group from a pre-assigned reading on the nature of qualitative research to facilitate their understanding on the topic. After the discussion, each student had produced a two-page descriptive summary on qualitative research characteristics. Their first field notes proved to be an informal assessment tool for recording their growing knowledge base about and familiarity with research-related content.

2) Identifying Research Topics/Problems and Developing Research Questions

Our objective was to introduce the first step in a research process: identifying research topics/problems and developing research questions. For students to better relate to the learning process we invited a former graduate of AKU-IET to share her experiences of identifying a research topic, the problems and challenges she faced and how she managed those. After the guest’s address, students discussed the sources of those problems and challenges in relation to the qualitative research characteristics. We then divided the class into small groups (five to six people). Each group was given a statement of a problem, which was pre-selected from the unpublished dissertations of previous M.Ed graduates. After individual readings, groups discussed and developed a collective understanding of the assigned research problem.
The groups were expected to write a research question(s) emerging out of these statements. Once each group had formulated its research question(s) the actual research question(s) was shared with groups followed by a class discussion comparing the two questions. Groups exchanged their work for peer review and feedback. We, too, provided collective and individual feedback. We also assigned a home-task for facilitating the assessed tasks and to reinforce the new knowledge and practice of new skills. Students were asked to identify a topic for their individual research plan assignment in light of the questions raised earlier by the guest speaker.

3) Developing the research focus

In the fourth week, we introduced the concept of using a research framework as an organizational tool as well as concept mapping (Lanzing, 1996) for visualizing interrelationships. We also noted that students used research terminologies with more confidence than before, which could be attributed to number of factors. However, since our course was their only formal exposure to research, we associate this increased confidence with the readings, class discussions and the opportunity to critique two research articles. With support from pre-assigned readings and a class discussion, students defined and elaborated a research framework. To encourage practical experience on preparing concept maps, students were divided in small groups of four and developed concept maps for the topics carried forward from the previous exercise (abovementioned) or selected a new one. Each concept map was peer reviewed through gallery presentations. Moreover, each group also received individual feedback on their concept maps.

For homework, students were asked to retrieve a specific article from a website specifically selected to prepare them for their concept formation and subsequent concept mapping exercise. They had to summarize the key points, and develop similar concept maps for their individual research plans to reinforce the newly acquired knowledge. The individual research plan was one of the assessed tasks required for the course, and students were supported through individual consultation and feedback in a series of pre-arranged meetings. Students found this exercise meaningful as it was process-oriented.

4) Literature Review

The purpose of the literature review was to introduce its uses, importance and place in the research process. From our earlier experiences, we knew that literature review was one of the hardest segments for students given their limited exposure to research-based reading and writing. Therefore, we allocated two weeks for this section. Building on the previous exercise in concept mapping, five volunteers were selected for sharing their concept maps with the whole class for discussion and review. Other students evaluated the concept maps in light of prior reading-based class discussions, their own group work and facilitators’ inputs. We provided our input through identifying good examples and non-examples. The rest of the concept maps, not selected for the whole class discussion and review, were also re-evaluated by respective groups. After initial inputs by facilitators highlighting the purpose and uses of literature review and a short discussion on how to conduct literature searches, students were sent to the library to identify relevant literature on themes represented by their concept maps. Afterwards, students shared their experiences of identifying and locating relevant literature, highlighting the challenges in and facilitating factors for the literature search. A session on plagiarism followed as our observation revealed that students copied verbatim from the text believing that they originally authored the texts. At this stage, students conducted a hands-on exercise in using the APA style guide for references.

The final outcome, at this stage, was a research topic, question(s), framework and concept map for most of the groups of students. Ideally, we would have liked a parallel development of individual research plans, but very few students, at this stage, had developed similar concept maps for their own research plans.
5) Choosing the research design

Our objective was to introduce two approaches in-depth. We selected a Case Study and Action Research approach. We believed that in Educational Research these are two main research methodologies in qualitative research which were feasible in the allocated timeframe. We invited two faculty members as guest speakers to share basic characteristics of Case Study and Action Research. The case study was demonstrated through illustrative examples from the faculty’s own doctoral dissertation. The action research was taught by a faculty member who had done many cycles of research herself and those with her students in a Social Studies elective course. Through various classroom activities, one faculty highlighted the importance of researching one’s own teaching practices through Action Research, while the other shared her experiences in the field such as the challenges and pitfalls in the role of a researcher. We, too, shared examples of our own research. As a group task, students identified a teaching/learning topic from their own context, and chose the research approach, justifying its application in their context. As a learning outcome, students were heavily engaged and involved in reviewing and critiquing research conducted by other researchers. The interaction allowed students to identify many issues in their own contexts which could later serve as good research topics. They were able to choose and justify the research approach. They also recognized that such situations could be improved through action research and narratives demonstrating in-depth, thick descriptions and interpretations as essential characteristics for case study research. Students not only learnt about the theoretical underpinnings of case study approach, they also saw an application of the approach to a real-life teaching and learning situation, a context in which all of them were familiar.

6) Choosing the research method(s) of data collection

Our objective was to introduce students to observation and interview methods as crucial data collection tools in qualitative research. The teaching strategies were discussions based on pre-assigned readings. These described how to conduct observations, which were later conducted in real classroom settings. Students were divided into groups, and sent to different classes to observe them in-session. Post-observation sessions with discussions followed. Many lenses of how one sees and perceives were discovered as students shared their observational notes. The shared field notes were analyzed and placed in categories such as structure, language, appearances, performance and so forth. Students also drew on the differences between casual observations and systematic deliberate observations as research tools were identified.

In order to develop students’ conceptual understanding in conducting interviews for data collection, we used brainstorming as a strategy to elicit students’ prior knowledge. Through group work, class discussions and facilitators’ input, students constructed knowledge and raised critical questions about the types of interviews, handling interview transcripts, translation and other related issues such as, inclusion/exclusion of themes, bilingual data and translation-related issues. Students were moved from an ontological approach to an epistemological one through hands-on methods by designing interview questions based on their main research question, and then rooting it in what and how literature and theory support these methods. This helped fills gaps in students’ previous knowledge base, which was mainly rooted in oral reading or abstract knowledge.

As a learning outcome, many of the students did not present the research design duly finished. The qualitative design had many characteristics, and students needed to show how their study fitted into this paradigm. Some wrote that their study was qualitative because the research question began with “How.” What they did not realize was that even some quantitative studies may begin with “How” such as, “How many students dropped out from Karachi schools last year?” Regarding the methods, those who opted for Case Study approach needed to demonstrate how their study was a Case Study. Those who were doing Action Research needed to better demonstrate what they would do in each cycle of Action Research. We
concluded that students depended on each other for knowledge and skills, while individually, they demonstrated a superficial understanding about the approach and design of research tools. Therefore, an individual interaction between student and facilitator became necessary.

7) Analysing the data

Students at this stage were introduced to the main data analysis techniques such as coding, theme finding and pattern-matching through practical demonstrations with real examples and activities from a research study. Furthermore, issues of reliability, validity, standardisation, triangulation and generalisation were discussed with concrete examples from their daily life. By now, the students were used to working in collaborative groups. Students made meanings from their field notes in groups, and generated themes from field data and research for analysis. Formal analysis and interpretation was done by each student on the design of their study and sampling procedures. The strategy of thinking individually, pair and share (TPS) (Slavin, 1991) in small groups for critical feedback was used. We walked the students through the various aspects of data analysis processes. The place of on-going field notes, reflections, memos and excerpts was further highlighted for the fieldwork analysis.

A guest speaker was invited to share her data analysis from her doctoral research work, research questions and her coding scheme (Strauss & Corbin, 1967). Students had to assign codes and place them in categories per group from their own research texts and explain to others the process of identifying themes. The issues of reliability, validity, standardisation, triangulation and generalisation were discussed with examples from students’ area of study. As homework, students were required to develop a coding scheme, and code their field notes.

The following week was kept specifically for filling students’ gaps. We brainstormed “What is data analysis?” This was followed by a class discussion on the on-going nature of qualitative analysis, evolving and shifting focuses, process of themes generation and making of meanings. Furthermore, students read ten tips for data analysis. Each group presented a summary of the assigned tip in one or two sentences followed by a class discussion on emerging issues. They also read about developing codes. One code was assigned per group, and each group explained its respective code to the others with examples. Students raised questions about cross-cutting issues like making generalizations, validity and reliability. Both faculty and peers provided feedback and responses to the queries.

8) Writing and Presenting the Research Plan

The M.Ed program requires course participants to undertake a dissertation. Accordingly, a major course objective was writing the components of a research plan. Step-by-step information on how to develop a clear understanding of writing a research plan was given to students. They also received guiding questions for reading a qualitative research report. Guiding questions included, “Why was the study undertaken?” and “How was the data collected?” Students were required to write a detailed methodological outline. This included the research question or purpose of the project, a brief outline of the research design or nature of the project, the value or benefit of this project a brief description of the research procedures/methodology as they affect the participants, and so forth. As a practice exercise, students filled out a dummy of the Ethical Review Procedures (AKU-IED-ERC, 2006-2008). They responded to questions such as, “Did you deceive participants at any stage?”

Proposal writing was another challenge faced by students. Hence, systematic and organized flow of thinking was generated over the past six months as a process-oriented learning outcome. Students undertook a reflective process to understand the importance of ongoing reflection and writing. As an outcome, all students during the qualitative research processes prepared a Research Plan, which was later graded.
For their research site, students had to contemplate the type of school they wanted to select and justified their decision. However, many of them described that they would try to find a school similar to the one where they previously worked. We appreciated their concern for their own school as a consequence of safety, accessibility and commuting issues. However, we felt that this should not be the guiding principles for site selection and advised them accordingly. Furthermore, many of them struggled with identifying their limitations, and put generalization as a quick limitation. They were made to realize that there is not one opinion about generalization being a limitation amongst qualitative researchers, and some even believed that we do not even worry about generalization being a limitation. That was not the purpose of qualitative research. Rather, they should have tried to explore in-depth issues of particular cases.

Another issue faced by most students was citing according to the APA style, therefore a workshop was conducted to assist them. Some even forgot to proofread their papers. The best outcome, however, was that 99% of students passed their assignment, revealing that they knew how to undertake their research in the following months.

**Challenges**

**Dealing with many disparities**

We observed that the philosophies of teaching and learning research diverged. As course instructors, our approach towards teaching and learning research was different than that of students. We took Action Research and Case Study approach, using collaborative work and cooperative learning to reveal what research was all about. Both, the reading material and its delivery, moved from simple to complex in terms of hands-on activities and discussions of theoretical and abstract concepts to allow people with different learning styles to move to higher levels of learning.

For us, the intended outcome of the course was the construction of new knowledge and enhanced skills of learners through active participation. However, course participants perceived the course outcome as an acquisition of new knowledge and skills transmitted from experts to novice researchers. A student responded in his course evaluation, “research was quite a new topic for me and I learnt many new things; specifically the most relevant reading pack and practical examples given by the facilitators enhanced my learning.” The teaching and learning strategies which seemed feasible during the planning stage were fraught with challenges when subsequently implemented. We observed that students responded well to the “what” of research (the definition, purpose, and significance) and the descriptions of research tools and methods, and they were able to understand the meanings relatively well. They used research terminologies and jargons in their discussions and written work. While this seemed initially encouraging, on close observation, we realized that certain decisions made democratically during class shifted the responsibility of students taking charge of their own learning to the teacher charting and executing the course. We questioned our philosophical approach. Were we constructing students’ knowledge or simply feeding them with more? For example, instead of asking students to locate research articles, we identified and assigned articles for reading-based discussions.

The learning path was more structured, systematic and one-sided action rather than interactive. On the pretext of research being a new discipline, students did not take ownership of independently finding more for/by themselves as we expected; they found it difficult. Hence, the element of discovery or exploring new knowledge was undermined. They were dependent on what was given in the literature, theory and class discussion. A student recommended, “in the beginning acquaint students with a lot of qualitative research articles as that is the first step of the journey towards knowing what research is about. For us it was difficult to even identify and distinguish research articles from other article. In the initial phase we
had no idea how to distinguish those nor critique them.” They also substituted the course reading pack as a textbook, and crammed the “what” of research through rote memorization. Nonetheless, the “how” of research was challenging for the students as these tasks needed higher skill levels and an in-depth understanding of the process. Learners felt time-bounded since they were unable to digest all the information during the course period.

At this stage, we had an intensive engagement with students providing collective feedback to the whole class as well as group and individual feedback. Students’ need and insistence for direct instruction took the form of intensive and sustained individual feedback, which increased as content became more complex. Yet some were not happy with this approach as one participant remarked, “discussion on reading material should be avoided in class. Students take advantage of this leniency and come unprepared to class.” On the other hand, a student responded, “it was good that they explained the article in detail which gave us a better understanding.” This put extra demands on our time. Second, the perception of research itself was different. As facilitators, we looked at research as a process, and attempted to build in the art of research in every task. Yet, the task of reading in order to critique a research article was perceived differently. While students were learning to critique literature, they also acquired the skills of using literature for conceptualizing their theoretical framework to address their research question, thus, furthering the research process.

Moreover, we had two overarching goals for the course: the short term goal was that students should be able to prepare a research plan to meet institutional standards, while the long term goal was to prepare teacher practitioners as researchers who have scholarship in research. The students, however, considered research a one-shot activity to obtain a product enabling them to pass. Similarly, we observed that students had a nonchalant attitude towards doing research. They seldom located any reading independently unless it was part of an assessed task. They blamed this on being over-burdened with tasks from their other courses. Non-graded assignments, especially out-of-class assignments were rarely undertaken. Therefore, a large majority of students were unable to develop a holistic view of learning, and came away from the course with gaps in their understanding of research with only superficial knowledge to meet minimum course requirements.

There could be several reasons for such an attitude or behavior. Firstly, students did not consider research as part of their educational agenda because as teachers, head teachers or education officials they seldom considered utilizing the knowledge gained from research. Research was not considered consumer knowledge. They were not yet producers of research because for them, research did not happen in their context. Secondly, in Pakistan, research is limited. Most of the course reading material came from the West. Given the limited experiences of research and its application to daily life, the purpose of research was removed from their context. Research was not seen as a tool to enhance or generate new knowledge or as a means for continuous professional development because there was little relational learning. It was not an empowering process, but rather, a manufactured product to meet certain institutional standards.

The third disparity was between the assumed and observed level of students’ understanding of academic reading and writing skills. We had gathered information about students’ background from their student profile, and assumed that with learning from ‘cognitive apprenticeship’ (Collins, Brown & Holton, 1991), which includes modeling, coaching, scaffolding, articulation, reflection, exploration of ideas (Ghefai, 2003), and sustained exposure to academic reading and writing, students would be able to fill the gaps in their previous knowledge. However, students had a mixed range of academic competencies and abilities. A majority fell below the average level with limited language skills and an inability to understand complex academic readings required at the Master level. They were struggling with basic tasks like reading and understanding a book chapter and/or journal article and jotting its key points. Only eight to ten students met competence expectations. This created an uneven pattern of class participation, which hindered the generation of meaningful class discussion as only few students came prepared to discuss and exchange ideas. They were well aware about these differences in knowledge and skills as clearly
indicated by a student, “individual attention should be given to each course participant as some do not participate at all.” Moreover, the lack of preparation of most students frustrated the small number of high achievers (Course Evaluation, 2007) who did not find the class sufficiently challenging. The disparity in intellect created divisions among students, which became known amongst as the “North/South divide” (Course evaluation, 2007).

The clash between our assumed and observed levels of students’ understanding and roles pushed us towards direct methods of teaching and led us to prepare two lesson plans. Plan A envisaged students who would play an active role in their own learning by posing problems and searching for answers through activities that took them beyond the assigned readings for sessions. The implicit assumption was that a majority of students read at least the mandatory course material. Plan B, conversely, meant spending most of our time on activities dealing with assigned readings through strategies like jigsaw reading, directed reading with pre-prepared guiding questions and group reading discussions. The latter strategy slowed our teaching pace to a point where we frequently would not move beyond the assigned readings.

Inability to break the dependency culture

We noticed that on the pretext of educational research being an unfamiliar subject, students relied mainly on our in-class, face-to-face sessions only. Regarding the readings, students only read the mandatory articles and chapters. Rarely did they read the suggested ones, relying only on the essential ones.

As we moved toward more complex content we also added “exploratory learning and discussion” (Jansen & Beyers, n.d) as one of our teaching strategies was student engagement in reasoning and justification. As very few students completed the assigned introductory readings, the process of reasoning and justification was impeded. As an example, a large majority did not retrieve or read articles on the logic and place of concept mapping in narrowing down the research topic, refining research questions and focusing the research scope. This was challenging as a few struggling shared, “there should be more frequent one-to-one meetings for discussing concept map and research plan.” Therefore, when students returned from their library trip, and were supposed to work on their concept maps in light of the relevant literature they had identified, few had notes that helped them label conceptual links with action words to complete their concept maps. Our reflective thoughts indicated that they also had not shared their concept maps with each other, foregoing the opportunity to build knowledge through peer support and constructive feedback.

Besides, we noticed that students were unable to adequately incorporate their personal experiences and knowledge to discussions on research studies done in professional contexts similar to theirs. A large number of students brought limited views and experiences of their own contexts so much so that they were unable to construct meaning from or within a larger perspective or scope. Furthermore, as facilitators, we searched for the articles rather than students retrieving them themselves. This put extra pressure on us by extending our teaching workload, especially since in Pakistan research is generally scanty and under explored in certain areas. Our provision of the articles deepened students’ dependency syndrome. Yet some students were dissatisfied, “please don’t give presentations on every article all the time, because some CPs make a habit of not reading the article for class.”

In addition, as students were fearful and threatened by the course reading assignments, we provided guiding questions to help them understand and critique articles. However, as many failed to read, we observed that this was based on their lassitude and nonchalant attitude towards academic reading. In fact, students expected our intense involvement on a one-to-one basis in the form of individual attention, feedback and unlimited consultations. Not only were their demands for individualized attention high, but they also expected every practice task to be carried out in-class with our supervision. Thus, time spent in
planning for critiquing the articles, and the teaching-learning strategies devised were inadequately utilized. Our teaching became more complex and increasingly inflexible. We also observed that while students completed group tasks during class, repeating the same task individually or collectively without our supervision became difficult. While course participants were allowed to obtain peer support and feedback, they still increasingly sought individual consultation and feedback from us.

Another strain of dependency was peer dependence. As only a few students came ready for class, the rest awaited for the prepared ones to lead and contribute to class discussions. While this may be attributed to limited English skills, their written assignments also revealed a lack of conceptual understanding. When we deliberately sorted and pulled quiet students into the discussion, they would repeat what was already said. This too was not taken in good spirit and the complain was, “each student should be treated equally in the classroom. Sometimes in the class some CPs were ignored during discussion and not given a chance to answer.”

**Linking theory to practice and practice to theory**

We found the fieldwork component very helpful in contributing to students’ understanding of practical issues in educational settings as it prepared students to undertake fieldwork closely linked to course aims and helped link theory to practice and vice versa. In fact, the first question that arose from students after their first field visit regarded the purpose of their visit. The field notes of their first day were revisited during the following weeks while addressing the theoretical underpinnings of research practices in educational settings as well as cross-cutting issues like making generalizations and the validity and reliability of data that can affect the quality of qualitative research.

Another benefit of the fieldwork component was providing students the opportunity to experience how research is undertaken as most students have not had this chance before. Students began to understand how familiar places on campus or classrooms could become likely topics of consideration for their research fieldwork. Similarly, some of the course readings contained references to ethics at various stages of the research process and a checklist for Do’s and Don’ts of using any particular method.

We also conducted a workshop on ethical principles and how to prepare documents for the University’s Ethical Review Committee. However, it was the structured visit to real classroom settings that raised students’ awareness of the ethical dimensions of educational research. Students re-evaluated their own conduct as researchers during their second post-school observational discussion. They contemplated ethical issues related to informed consent, voluntary participation and withdrawal, no harm/no risk of harm, confidentiality, anonymity and reciprocity. Moreover, they also picked up pieces of information from their earlier field notes which they wanted to interpret differently in light of the purpose of research and the criteria to help define indicators.

In addition, while analyzing their fieldwork notes, students also realized how their personal opinions and experiences could bias their observations and understandings. For instance, students wrote “[] is a bad teacher because [s/he] sat throughout the lesson” or “It was a bad classroom because all the windows were closed.” (M.Ed student reflection: Class of 2007)

**Our Successes**

**Research Plan: A learning outcome**

Despite the challenges faced and the problems encountered, every student managed to prepare a Research Plan at the end of the course, which was one of the three graded assignments. Not only did they hand in
research plans on time, a majority of them also secured a passing grade. The analysis of their research plans revealed that their writing was strong on the ‘what’ of research, but the ‘why’ and ‘how’ left a lot to be desired. Although a large majority had very clear concept maps of their research topics, the number of students who were actually able to articulate their concept maps effectively was very small. Similarly, the strongest part of the research plans for most students was the literature review section where a majority had used original, jargon laden language (heavy on quotations). Their writings did not demonstrate their own voice. Rather, it was the voice of the authors as the synthesis of literature was conspicuously missing in many cases.

Documenting and classifying teaching: A practical and process-oriented experience

As said earlier, planning a research course and then critically assessing how that planning unfolded over an extended period of time gave us insights into improving ours and the students’ research abilities. It improved our understanding of research through a reflective process as we were constantly looking for ways that could enlarge our students’ knowledge base about research while improving their skills for undertaking research. Hence, every step we took, every concept we taught and every application we facilitated in the course was a product of observation and reflection. Needless to say, planning for every session further exposed the nuanced nature of teaching about research versus teaching the art of doing research. The latter necessitated making the processes of research an active on by having students experience how it felt to undertake research. Simultaneously, the art of doing research also needed to be made visible in the form of a product, thus, calling for a systematic and organized flow of thinking as a process-oriented learning, culminating in the writing of a Research Plan.

The teaching of research as a process-oriented learning also sensitized the students about the rigor of and perseverance for research. As the flexibility of action research allowed us to respond to the emerging needs of the students, we observed that the number of their queries pertaining to the mechanics of research increased as did the demand for one-to-one interaction.

Implications

Our research findings have serious implications for the teaching and learning of research governed by constructivist philosophy in contexts like ours. In Pakistan, research culture is generally weak and the term research is not understood well, especially by a majority of school teachers, head teachers and education officials because they are predominantly neither consumers nor producers of research. When these practitioners enter into an in-service institution for continuous professional development, they do not consider research as a tool to prepare them for future responsibilities or plans. Research courses are seen as a formal requirement to obtain a degree rather than a means of acquiring necessary skills. This unconcerned attitude affects the amount of time and effort students expend in learning how to do research.

Constructivist philosophy of teaching and learning, conversely, is heavily learner-centered whereby students construct their own knowledge and concepts based on previous knowledge with instructional situations and stimulating opportunities provided by their facilitators and peers. In the process, students are expected to become active independent seekers of knowledge rather than passive receivers of information. Given the lack of interest in learning how to do research, the facilitator’s role becomes very challenging.

It is equally challenging for the learners. In a context like ours, students enter into the learning process with an inadequate knowledge base, extremely limited academic skills and insufficient experiences of research, which increases their feeling of anxiety and insecurity when learning new content material.
Their past experiences of teaching and learning have shaped their expectations of teaching methods to be structured and directional, and they regard the teacher as an expert and authority not to be questioned or challenged. In addition, the language of the environment in which they find themselves is not the language of their prior learning. All these factors create an environment of disconnection which overwhelms students. Constructivist philosophy of teaching and learning in its emphasis on higher level skills forces students to learn the expected pre-requisites in order to move forward. The facilitator expects and encourages them to verbalize their thought processes when students are learning not only English, but are also struggling to master the correct vocabulary of research. All these miracles are expected within a stipulated time of usually one or two semesters.

Our research findings also have implications for the future role of AKU-IED graduates as teacher educators. While at a personal level, students’ agendas may not include research as an activity for their professional development, their future role as change agents in their institutions would require not only independently conducting research in their own contexts, but also teaching, training and developing other teachers to become researchers. The focus of the formal research courses (two core courses) and the requirement of producing a dissertation to qualify for the Master of Education degree are means of showing how to do research, not on how to teach it.

In addition to the dependency syndrome from our own observations, Mohammad and Kumari (2009) reported a similar condition when their course participants returned to their professional contexts. They noted that participants were unable to comprehend and deal with complex issues they faced on their own (Mohammad and Kumari, 2009). However, the students’ own perception about their capabilities as future researchers might be different as it was evident from their evaluation of our course; many of them assumed because they had produced a research plan they could conduct research in their own context.

For us, as faculty involved in teaching of formal research courses, our findings indicate a gap in investigations of teaching of research as a discipline. While textbooks on research in Education have chapters on research strategies, methods and techniques and research articles report primary research, the field challenges and success stories in general and from classrooms, in particular, are often not related and shared with the public at large. Hence, academicians, especially teachers, do not realize that research is a process-oriented initiative or the rigor and perseverance required. Consequently, their perception of research is product-oriented. The purpose of research, then, becomes to produce a research report or dissertation as our students believed. As we used constructivist philosophy for implementing our courses we looked for examples that would create awareness among students that research is an art, which embodies both process and product as it generates new knowledge. We found plenty of classroom teaching examples for Mathematics, Science, Reading and Writing, but not for research as a discipline. Similarly, we could not locate any research material that actually documented the process of teaching educational research to non-traditional students informed by constructivist philosophy. Our research was a modest attempt in this direction.

Conclusion

In Pakistan, non-traditional students in Education, in general, have limited knowledge and experiences of practical research and research-related concepts. Therefore, knowledge and skills to be constructed by students of research in institutions of higher learning becomes more challenging and strenuous, requiring extra rigor and perseverance. Constructing knowledge and skills in research and applying the same in their own context takes longer for these students because they come with deficiencies in knowledge and/or conceptual understandings. Because constructivism is rooted in partnership and a co-working relationship, and research being new or unfamiliar subject for many students, the partnership becomes more unequal, which may not necessarily be the case in a Western context. In the latter, students have been exposed to the inquiry approach since early levels of education, and they are also consumers of
research. This is not the case in Pakistan. Both teachers and students have to work extra hard in a learning environment created through constructivist philosophy of teaching and learning to create new knowledge. The burden, however, is greater the teacher to sustain such a learning environment as s/he is expected to give more in the teacher-student partnership, making it imbalanced. The asymmetrical partnership inadvertently fosters a culture of dependency amongst students which, in turn, retards the growth of knowledge and skills required to take the rigor of research independently. For students, a teacher continues to be an expert with the power and legitimate authority to transfer or deliver knowledge rather than a facilitator as required in constructivism. This study is rooted in evidence-based inquiry and stems from our own work and should be considered in light of our findings.

References


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