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A Study on Implementation of Suggested Pedagogical Practices in ADE & B.Ed. (Hons.)

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Abstract

The research aimed at investigating the implementation teaching pedagogies suggested in new ADE/BEd (Hons.) programs in teacher education institutions of Baluchistan. Moreover, it was focused to find out the challenges faced by teacher educators in implementation of these pedagogies. The research was conducted in seven teacher education institution spread across Baluchistan. The data was collected through survey questionnaire from 42 teacher educators, classroom observation of seven general science teacher educators and semi-structured interviews from seven teacher educators. The data from three instruments helped in triangulation of findings. The results showed that teacher educators recognize the need of implementing suggested pedagogies. They are engaged in moving towards greater use of student-centered pedagogies but not to the extent as reported in self-reported questionnaire. Despite willingness, teacher educators found it quite challenging to use ICTs and educational equipment effectively. It is also a challenge to determine suitability of a teaching method for a particular content and smooth integration of more than teaching methods during one lesson. Lack of physical, financial and academic resources is also a serious problem facing teacher education institutions in implementing student-centered pedagogies.

Keywords: implementation, pedagogical practices, ADE/B.Ed(Hons) curriculum

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Introduction

Teacher Education in Pakistan has been consistently criticized for having marginal effect on the teaching skills of the prospective teachers. Critics also went to the extent of denying the need of teacher training. In this situation, it was essential to reform teacher education programs. The reforms started in the form of shifting from two year degree programs to four year degree program. The intention was providing prolonge pedagogical training to the prospective teachers and aim for gradual shift from teacher-centered to student-centered teaching. A two-year associated (ADE) and four year Bachelor degrees in Education (B.Ed. Hons.) were introduced in various teacher training institutions across the country to prepare specialized & highly qualified teachers with better skills and aptitude towards teaching. The curriculum revision, training of teachers and development of support material was conducted by Higher Education Commission (HEC) with support from Teacher Education Project (TEP) (for details http://www.pakteachers.org/).

This effort aimed at increasing the capacity of the teacher educators to teach through student-centered interactive pedagogies in the classroom. The new curricula aimed at helping the prospective teachers in achieving the ten professional standards for teachers as well as helpful in promoting the student-centered learning in Pakistani Classrooms. The pedagogic environment pertaining in the classrooms and the school, especially the nature of support for implementing the pedagogic innovation, influences teachers' decisions to adopt a pedagogic innovation and determines how it is incorporated into pedagogic practice. It is to determine the effect of support provided to teaching methods.

The assumption behind encouraging student-centered pedagogies is that the exposure to such pedagogies will make these methods second nature of prospective teachers. They will use these methods while teaching in classroom.

The assumed change is very much dependent on the extent of success with which teacher educators reform their teaching methods in classroom. There is ample evidence that amenability in one's prevailing teaching practices is a challenge in itself. This study is motivated by the existing accounts of divergence between the expected and the actual teaching practices. While anecdotal evidence of such divergences exist, they are too important from a policy perspective to be left without a systematic investigation of why teacher educators do what they do in their classrooms. Considering the importance of above mentioned argument It seems worthwhile to study the pedagogical preferences of teacher educators in the context

of the current wave of reforms in the preservice teacher education—an area that has so far been neglected in studies within the broad field of teacher education in Pakistan. The focus will be on highlighting the extent to which teacher educators actually use innovative (suggested) teaching methods use by teacher educators in various institutions of Baluchistan. This will also lead us to know about the reasons, in case the teacher educators are not able to implement innovative methods in their teaching. This study is to investigate the extent to which the suggested pedagogies in ADE/B.Ed. (Hons.) are implemented in teacher educators' practices. The study will investigate the extent to which teacher educators were able to use the suggested pedagogies and reasons for variation in the use of suggested pedagogies.

The above stated problem investigated by addressing following objectives;

1. To explore the current practices of teacher educators in general science course.
2. To identify the pedagogical challenges faced by ADE/B.Ed. (Hons.) teachers in adapting to student-centered teaching.
3. To propose the strategies for best implementation of new B.Ed (Hons)/ADE program

To achieve the objectives of this research study research questions framed to address the following issues.

1. Are the current practices of teacher educators in the General Science course aligned with the practices suggested by the B. Ed. (Hons.) and ADE curriculum?

    - What are the current practices of teacher educators implementing the General Science course in the ADE and B. Ed. (Hons.) curriculum?
    - What practices are suggested by the General Science curriculum in the ADE and B.Ed. (Hons.) programs?

2. What are the reasons of variation in the comparative use of suggested pedagogies by teacher educators during teaching science to ADE/B.Ed. (Hons.) classes?

In Pakistan, it is generally assumed that our classrooms are quite teacher oriented. Usually, teacher dominates the class time by providing information on the topic under discussion with least concern about the needs of the students. This tends to make classes more one sided and students tend to lose their interest in the class

work. This leads to wrote learning of the content which minimizes students' ability to consume learned knowledge in their professional and practical lives. Different reforms were introduced but classroom practices remain unchanged.

Currently, Associate Diploma in Education (ADE) and Bachelor of Education (BEd) programs has been executed first time in Pakistan with the collaboration of USAID Teacher Education Project, Provincial Departments and Higher Education Commission (HEC). The curricula of these programs is demanding and interactive teaching approaches are devised to transform existing orthodox system to modern education system through replacing traditional teaching styles with interactive teaching methodologies. In order to proper implementation of newly introduced programs and to cope with standards set in National Professional Standards for Teachers (NPST), interactive and student-centered activities are essential.

Introduction to Student - Center Teaching

The concept of child-centred education has been derived, in particular, from the work of Froebel and the idea that the teacher should not 'interfere with this process of maturation, but act as a guide' (Simon 1999). Student–centred learning, such as flexible learning (Taylor 2000), experiential learning (Burnard 1999), self-directed learning. The paradigm shift away from teaching to an emphasis on learning has encouraged power to be moved from the teacher to the student. The principal implication of student center pedagogy pertain that students are the key initiators and architects of their own learning and knowledge-making, rather than passive 'vessels' who receive the transmission of knowledge from 'expert' teachers. Student-centered learning (and teaching) has itself been variously defined as a process by which students are given greater autonomy and control over choice of subject matter, the pace of learning, and the learning methods used Gibbs, 1992. Weimer (2002) identifies learner-centered teaching as encompassing five changes to practice: shifting the balance of classroom power from teacher to student; designing content as a means to building knowledge rather than a 'knowledge end' in itself; positioning the teacher as facilitator and contributor, rather than director and source of knowledge; shifting responsibility for learning from teacher to learner; and promoting learning through effective assessment

Student-Centered Methods in Literature

A variety of approaches fit beneath the umbrella of student-centered learning, including case-based learning, goal-based scenarios, learning by design, project-based learning, and problem-based learning. Common to these different approaches is a central *question* (Jonassen, 1999) that creates a need for certain knowledge and activities. As Hativa (2000) has identified, student centered instructional methods include discussion, group work, role-playing, experiential learning, problem based learning and case-method teaching. Independent projects, Group discussion, Peer mentoring of other students, Debates, Field trips, Practical, Reflective diaries, learning journals, Computer assisted learning, Choice in subjects for study/ projects, Writing newspaper article, Portfolio development (O'Neill & McMahon, 2005).

Significance of Student-Center Teaching

It can achieve learning outcomes more frequently and to a higher standard than those in instructor-centered approaches (Mostrom & Blumberg). As students' academic work is truly embedded in their past cultural heritage, at the same time that their cognitions and practices are situated in the mutually constructed meanings of the present classroom (Trent, Artiles, & Englert, 1998). Although there is growing evidence that student-centered learning activities promote the development of higher-order skills such as critical thinking and problem solving (e.g., Barab & Landa, 1997; Gallagher & Stepien, 1996; Savery & Duffy, 1995), there are difficulties associated with supporting student-centered learning.

Challenges in Using-Student-Center Teaching

There are many challenges in promoting teachers' use of active-learning, student-centered pedagogies (e.g., see Alexander 2000; UNESCO 2004). The quantity/quality of pre-service preparation, the material conditions, curriculum and examinations and the cultural appropriateness (American Institutes for Research, 2012).The practical challenges center on the diversity of the student; different educational and professional backgrounds of the class, particularly because, as a group, they have not had any common learning experiences. The practical challenge in this case is, in a nutshell, to build the common experiential ground necessary to facilitate students' engagement with substantive issues of the subject.

Challenges for teachers

Students in learner-centered environments must: (a) be challenged, (b) be given an explanation of what is expected, (c) have choice and control, (d) work cooperatively with others, (e) see activities as personally interesting and relevant, (f) believe they have the personal competence *to succeed, (g)* feel they are respected and that their opinions are valued, (h) have some individualized attention to personal learning preferences and needs, and (i) have some input (1997). Students need adequate resources for learning. It is encouraging to note that schools are providing increasingly more supports to enhance student learning. These include, for example: placing an emphasis on early literacy; providing students with supplemental education choices such as satellite-learning programs specializing in learning needs, in-school learning resource programs, after-school laboratories, and summer school; providing tutoring and mentoring; offering students one-on-one guidance from a counselor, teacher, or other mentor; increasing the involvement of parents in the education of students; and enhancing ongoing professional development for teacher and other school staff (Darling-Hammond, 1998).

In Pakistan most of the teacher educators are deputed from schools, after entering the profession of teacher education, teacher educators begin to deconstruct their previous identities as school teacher and reconstruct them in the context of higher education. Cole (1999) identify that teacher educators face difficulty in many ways, e.g. the acquisition of pedagogical knowledge, enhancement of their existing knowledge, skills of research, as a result of these multiple challenges teacher educator re-conceptualize their practices Cole (1999). It is perhaps commonsense that teaching – especially using active-learning, student-centered pedagogies – is more challenging when one is working in classrooms with large numbers of pupils and/or with poor facilities and limited instructional resources (American Institutes for Research, 2012).

The development and implementation of a student-centered environment within a class-room context requires different roles and responsibilities for teachers. Often teachers find themselves ill-equipped to deal with the requirements for managing student-centered activities, and thus have difficulties implementing student-centered learning in their classrooms (Glasgow, 1997; Hannafin, Hill, & Land, 1997; Saye, 1998). Teachers who are not intimately involved in the design, development, and implementation of student-centered learning activities may either provide too much structure for students or provide no structure at all for students and disengage themselves from the activities (Brush, 1997; Brush & Saye, 1999).

Challenges for students

Students need adequate resources for learning. encouraging to note that schools are providing increasingly more supports to enhance student learning. These include, for example: (a) placing an emphasis on early literacy; (b) providing students with supplemental education choices such as satellite-learning programs specializing in learning needs, in-school learning resource programs, after-school laboratories, and summer school; (c) providing tutoring and mentoring; (d) offering students one-on-one guidance from a counselor, teacher, or other mentor; (e) increasing the involvement of parents in the education of students; and (f) enhancing ongoing professional development for teacher and other school staff (Darling-Hammond, 1998).

Challenges of classroom environment

Schools are considered learner centered if they promote two major qualities; (a) cultures of caring, learning, change and collaboration and (b) inclusive, respective and flexible practices that value and capitalize on diversity among students and staff. Essential features of the ideal classroom environment include (a) a well-supplied, well-de-signed space, (b) a regular daily routine, (c) strong parent-teacher communication, (d) strong teaching methods and teamwork among teachers, and (e) a varied curriculum, language experiences, and literacy experiences (Burns, Griffin, & Snow, 1999). In order to implement the optimum classroom environment, schools should incorporate a variety of strategies including the, effective design of classroom space, research-based materials, take-home materials, and learner-centered climate (Bansberg, 2003). Successful implementation of student-centered learning requires enhancements to the learning environment that teachers and curriculum developers must integrate into existing curricula (Hannafin & Land, 1997; Hawley & Duffy, 1997).

Implementation of New Curriculum

As all above discussion highlighted that a new curriculum for 2 years ADE & 4 years B.Ed. (Hons.) program has been introduced in Pakistan and this new curriculum emphasized the use of interactive/innovative pedagogies to produce active, highly qualified teachers, who in turn promote student-centered teaching and learning when join teaching profession after their graduation from teacher training courses. Effective implementation of progressive pedagogy “requires flexibility in classrooms and schools to deal with variability rather than assuming uniformity”

(Chisholm & Leyendecker, 2008). Montero-Sieburth (1992) highlighted that curricula should not be perceived in isolation, but should rather be seen as part of a whole spectrum of related factors. Implementation of any training program needs instructor ability to communicate the curriculum in an effective way.

Instructor should maintain the classroom control and keep the students engaged on the topic (Allen, 2004). Lillian (2000) has described that poor coordination between curriculum development, teacher development and learning materials also affect the effective implementation.

Method

This study investigated the pedagogical practices of teacher educators, narrowly targeting only those who are implementing the General Science course in ADE (Associate degree in Education)/B.Ed. (Bachelor of Education) (Hons.) program, at the colleges and universities in Baluchistan. A mixed methods approach was used to answer research questions. A hybrid data collection strategy was deployed to uncover quantitative and qualitative insights and findings in terms of teacher education faculty's perceptions, practices and reasons for using/not using suggested pedagogies in classroom. Underlying factors were explored through faculty interviews in order to determine what has worked well and what has not, identifying strengths and areas requiring improvement. The survey, classroom observation, and interview data was analyzed to develop insights about the degree of alignment between the suggested and actual pedagogical practices in the General Science course as well as the rationale stated for them by the teacher educators. The data collection in each selected institution involved completion of survey questionnaire from all teacher trainers, three class observations of general science teachers (three teachers in each institution) on consecutive days, thus making a total of 63 class observations from seven selected institutions. In addition to this, seven interviews of teachers (one from each institution) teaching general science were also recorded.

Results

Results found on the basis of analysis are presented below.

Self-reported use of teaching methods by teacher educators

A Questionnaire was used to find out the different teaching methods practiced by different teacher educators during their classroom teaching in different teacher training institutions in Balochistn. It is quite promising that teachers are

engaging students in pair work, providing feedback, using multiple teaching methods in one lesson, and involve students in class activities like presentation, group discussion etc.

Tecaher have also reported use of questionioing as tool of student engagement and linking student previous learning with current.There is a set of self-reported practices which are being developed and these practices need to be encouraged. The data has showm tendency of teachers to use project work, class demonstration, follow-up work and use of elaborative class talk during lessons as cource of teaching science concepts.Teacher educators are yet to manage class experiments, hands-on work and first-hand direct experience as tool of teaching in classroom. There was very limited number of teacher educators who reported use of above mentioned methods of teaching as their practice.

Self-reported use of AV aids by teacher educators

White board is the most frequently used A.V. Aid among teacher educators. Other than white board, teacher educators still tend to use traditionally popular/ accessible AV aids like charts, teacher/student made low cost AV aids and flash cards. They have reported their expertise in using these AV aids and are quite confident in using best use of it. Despite, emphasis on using innovative and modern AV aids suggested in the new ADE/B.Ed (Hons.), teacher educators yet seem to use videos, audios and models in their teaching. The reason may be the availability of these resources in teacher education institutions and/or equipment needed to utilize these resources.

Self-reported student-teacher relationship by teacher educators

Teacher educators are keen in creating comfortable, interesting, responsive, respectful and participative class environment. They are also conscious about the importance of constructive feedback on student behavior, communicating behavioral and academic problems to students and sharing manners related to student-teacher interaction.

Practices of Teacher Educators by Age

The result shows that young teachers use interactive pedagogies and AV. Aids to supplement their teaching mostly. But significance values represent that there is no significant difference in using interactive pedagogies and A.V.aids. Comparison between the mean value of student teacher relationship of middle age teachers and

young teachers, shows that middle age teachers develop more student teacher relationship as compared to young teachers. But significance value (.312) shows that this difference is not significant.

Effect of Teacher Educator's Academic Qualification on use of Teaching Methods, AV Aids and Student Teacher Relationship

The comparison of mean values for use of teaching methods and A.V. aids indicates that science teachers use more interactive pedagogies and A.V. aids as compared to arts teachers. But significance value represents that this difference is not significant. The mean value (68.58) of teacher educators with science education is greater than the mean value (63.44) of teacher educators with arts education. This indicates that science teacher develop more student-teacher relationship as compared to arts teachers. And significance value (.025) represents that this difference highly significant.

Effect of Teacher Educator's Professional Qualification on Use of Teaching Methods, AV Aids and Student Teacher Relationship

The result shows that difference in professional qualification is not a source of variation in use of teaching methods, AV aids and student-teacher relationship.

Teaching Method as observed during teaching

An Observation checklist was used to find out the different teaching methods practiced by General Science teacher educators during their classroom teaching in different teacher training institutions in Balochistn. The analysis is based on observations of 7 teacher educators from 7 teacher education institutions across Baluchistan. Classroom discussion, presentations and exploring previous knowledge of the students were frequently observed. The practices need to be encourage & should promote includes, presenting a problem to the students; engage the student in performing experiments and repeating the lesson if needed.–Rarely used teaching practices, engage the students in story writing; finding material on computer; think in pair and share and using related vedeos. it indicates that teacher eduators need to know something or need certain facilities to use those practices.

Use of AV aids as observed during teaching

The general Science teacher educator's observation analysis about the use of AV. Aids in their classroom teaching practices. White board was frquently used. Use of multimedia and flash cards are in developmental phase & need to attention for

promoting their use in teaching practices of teacher educators. While use of tricky track pictures; overhead projector; 3 dimensional models; cube games was rarely observed.

Student-Teacher relationship as observed during teaching

The results represent relatively a good classroom environment. Frequently observed environment include, students call each student by name and encourage the students efforts; students actively participate in classroom activities and feel no fear in asking questions; teachers develop strong social interaction with students and look like a friend of the students more than a teacher. The environment which is in developmental phase and need attention to improve were, assure the students that they have the ability to do well; show some aggression to students mistakes and point out the students mistakes in front of the classroom; motivate shy students and give extra time if needed.

Comparison of Self-reported data from Teacher Educators and Class Observation

The teacher educators self-perceived use of teaching methods and AV aids is different than observed data. Teacher educators perceive that they use more teacher centered pedagogies and utilize AV aids to larger extent as compared what they actually do in classroom. They case is opposite when it comes to student-teacher relationship. Student-teacher relationship is actually better than what they perceive. Teacher educators are better in developing effective communication and friendly interaction with their students than what their perceived level. The teaching practices found common in their self-reported and observed data included use of Group Discussion, Think-Pair-Share, Jigsaw, Number-Head-Together and Question Answer Method. Relatively scarcely observed pedagogies were use of practical work, gallery walk, experiments, use multimedia, net searching, role play and project approach. The methods in which educational equipment or any specific technical skill was required were the one least used in classroom despite teachers expressing their desire to use them as suggested in new curriculum and training guide.

Challenges faced in transition from traditional to suggested innovative pedagogies

There was reasonable variation in the meaning associated to 'active learning' by the teacher educators. This in itself was a challenge as teacher educators were implementing what they understood by the notion 'active learning'. The meaning varied from very basic understanding as, 'two-way communication' to relatively comprehensive meaning as, 'becoming self-responsible'.

Reasons for not being able to implement the innovative pedagogies as suggested in new curriculum

Teacher educators are facing number of challenges in shifting towards use of suggested teaching pedagogies. These challenges relate to non-supportive stereotype institutional environment, lack of skills, prevailing teaching-learning culture, fear of change, lack or insufficiency of educational equipment, financial constraints, lack of availability of indigenous resources and lengthy syllabus.

Conclusion & Recommendations

The results of this study have reported reasonable change in the teacher educators' perceptions about their use of suggested teaching pedagogies. There is gap in perceived and observed use of teaching pedagogies in favor of greater change in perception than practice, but beginning of change is visible. The self-reported data indicates that teacher educators were not able to match their to change with their actual classroom practices. Teacher Educators were still facing problems in implementing some of these activity based student-centered practices like project work, use of internet in teaching-learning, gallery walk etc.

The teacher educators have been provided considerable training in designing class activities like group discussion, Think-Pair-Share, Jigsaw, Number-Head-Together, question-answer method, practical work, gallery walk, experiments, use multimedia, net searching, role play and project approach. It was observed that teacher educators rarely use three dimensional models, cube games, tricky track pictures and overhead projector during teaching-learning process. In order to promote the value and use of AV aids, well established and well equipped laboratories and trainings on how to use these teaching resources should be provided.

Teacher educators are aware of the importance of building strong relationship with their students in order to create a healthy environment for teaching and learning process. It is therefore suggested that if teachers want to change student behavior and attitudes, they should start by modifying their own behavior and attitudes.

Teacher educators' age, qualification and teaching experience are sources of variation in their use of student-centered pedagogies.

The teacher educators with science background showed better use of innovative teaching approaches, but still it seems suitable to intentionally engage teacher educators with social science background in capacity building workshops intentionally focusing on development of interaction skills.

There was negligible difference in the teacher educators use of teaching pedagogies, AV aids and maintain student-teacher relationship. This reinforces the need of improvement in the quality of teacher education programs. There is need to make the curriculum of these programs culturally relevant, enriched in content, strong in pedagogical skills to visibly create difference in trained and untrained teachers.

In order to enhance the use of student-centered pedagogies following measures need to be introduced/continued.

Training of Teacher Educators

It is important to make the training contextually relevant by maximizing the use of indigenous resource material. The language and borrowed material from western books is sometimes contextually detached and adds unnecessary complexities in the process of teaching-learning. An on-job support through experienced peers to address day-to-day issues of classroom teaching can add to capacity of teacher educators more quickly. This will also make the training contextually relevant.

Development of Indigenous Teaching Resources

There is need to promote development of local resources with the involvement of local experts and teacher educators. The textbooks, class activities and AV aids need to be locally made, preferably in national language.

Provision of Basic Infrastructure Compatible with Needs of Student-center Teaching

Teacher educator's skills can best be utilized if the infrastructure of teacher education institution provides pre-requisite physical infrastructure for practicing student-centered teaching. This is especially relevant to teaching of science where well equipped laboratories are essential for effective training of science teachers. This aspect needs special attention in Baluchistan.

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