

Creating Interactive Classrooms: Barriers for the Teachers in Pakistan

Uzma Dayan* & Abida Bano**

Abstract

One of the essential features of modern teaching strategies is creating an interactive classroom environment. Such a classroom environment, however, is hard to find in Pakistani schools. This mixed-methods research aims at exploring Secondary school teachers' experiences and problems of making their classrooms interactive. Sample of the study included fifty teachers from High (Secondary) schools (25 males and 25 females) from Khyber Pakhtunkhwa, Pakistan. The study uses two tools of data collection i.e. questionnaire and interviews. Qualitative data was analyzed thematically, while Quantitative data was analysed and presented through simple frequency count and percentages, for augmenting the qualitative findings and triangulation purposes. Results reveal that most teachers tried to promote effective schooling by adopting learner-centered approaches during their teaching. They, however, faced substantial barriers in applying such strategies. These barriers included lack of cooperation between the head of the schools and teachers, lack of resources, and traditional school cultures that promoted teacher-centered approaches of teaching. The study concludes that for the promotion of interactive approaches in Pakistani schools, a culture of trust and collaboration among the school staff, head teacher and educational officials is essential.

Keywords: Pakistan, Interactive classroom, Barriers, Teacher Training,

Introduction and Background

In interactive classrooms, students learn through discussions, questioning, gathering informations and processing it by articulating what they have discovered or learnt (Krause, Bochner & Duchesne, 2003). An essential feature of interactive classrooms is bringing knowledge and experience to the classroom and sharing it with fellows. Classroom activities have a powerful impact on students' cognitive

* Lecturer, Institute of Education and Research, University of Peshawar

** Assistant Professor Institute of Peace and Conflict Studies, University of Peshawar

development (Herbert, 2000; Meadows, 1998). The Constructivist school of thought argues that knowledge is constructed and learners are actively involved in this construction (Phillips, 2000). They, therefore, must be encouraged to take part in the process of constructing new knowledge (Fosnot, 1993; Phillips, 2000; Wells & Changwells, 1992). Constructivists also encourage teachers to provide experiences that help students build their current knowledge (Duit & Confrey, 1996; Kearney & Treagust, 2001). Teachers can make it possible by making their classrooms interactive i.e. by encouraging group work, cooperative learning (Slavin, 1990), discussions and question-answer sessions (Khan, 2005). Alongside all this, school culture also plays a pivotal role in providing space for interactive learning (Frost & Dureant, 2004; Westbrook et al., 2009). Effective teaching depends not only upon a teacher's personal qualities, level of motivation, but also on the school culture i.e. the role of head teachers, the resources available and the policy of the authorities (Ali & Rizvi, 2007).

Classroom is the key place around which revolves all activities of conventional school system (Mishra, 2009). Since school improvement focuses on improving students' learning, it follows that all teachers can and should be supported in exercising leadership (Durrant & Holden, 2006). Teachers play the major role of leadership in the classroom (Mishra, 2009). Literature on transfer of training shows that the newly inducted teachers get into teaching profession with a set of beliefs about teaching and learning (Chubbuck, Clift, Allard & Quinland, 2001; Westbrook et al., 2009). The literature also reveals that a great majority of teachers find themselves in a difficult situation during their transition from training to the classroom (Khan, 2006; Khan, 2013). For instance, they might believe in interactive teaching and learning, but find its application difficult in actual classrooms (Ashraf, Khaki, Shamatov, Tajik & Vazir 2005; Westbrook et al., 2009). They find a gap between what they were taught in training and the field realities (Ashraf et al., 2005; Veenman, 1984; Westbrook et al., 2009).

It has been observed that teachers, particularly in public sector schools, follow certain patterns of teaching, set either by head teachers or educational officials (Dayan, 2009). Most of the teachers still follow the traditional methods of teaching (Westbrook et al., 2009). There is a general sense of dissatisfaction with the quality of teaching and learning in Pakistani classrooms. Passive and teacher-centered approaches to teaching are common in the schools (Qureshi & Shamim, 2009). Students in the public sector schools are not active participants in classroom activities. It is the teacher who is at the center of activity and the learners remain quite (Dayan, 2009). Despite the international consensus that quality instructional process is learner-centered (UNESCO, 2004);

Pakistani classrooms are characterized by transmission of contents and rote learning (Ali, 2000; Rarieya, 2005).

Research also reveals that teachers' beliefs are different from their practices (Qureshi & Shamim, 2009). Most of the teachers are unaware of the use of educational technology. A very small number of teachers use audio-visual-aids and technology in their teaching (Ali, 2000). Question arises, "If teachers have received pre-service or in-service training, why it is not practiced in their classroom?" Whether the pre-service training was not effective or the circumstances in the schools were not favorable for applying interactive approaches? Whether teachers had been part of Continuing Professional Development (CPD) programs or not? Such and related questions prompted this study. This study explores the constraints that prevent teachers from taking initiative and playing leadership role in promoting the interactive classrooms. The study, therefore, aimed at exploring the following major research question:

What are the main barriers that prevent public sector school teachers from making their classrooms interactive?

The major research question was followed by the following two subsidiary questions:

- What experiences and/or challenges do teachers of public sector schools have while adapting learner-centered approaches?
- How do teachers of public sector schools view the role of head teachers and other staff in applying learner-centered approaches?

In the following sections, a brief background on state of education and school quality in Pakistan is presented. This section is followed by a brief discussion on teacher education in Pakistan, after which research methodology, results and discussion sections follow. The final section presents the conclusion and recommendations.

Education in Pakistan: An Overview

Formal education in Pakistan is divided into variety of ways such as schools (public and private), and madrassas (religious). Public sector schools (the mainstream education system) follow the curriculum prescribed by the Pakistan Ministry of Education. Urdu, the national language of the country, is the medium of instruction in a majority of public sector schools. There is no uniformity in the curriculum of privately run schools. The various private sector schools follow curricula of their own choice. Similarly, these institutions have set their own criteria for the selection and appointment of teachers. Unlike public sector schools, pre-service training is not considered essential for entry to private schools. However, these institutions emphasize in-service teacher

training and arrange training for teachers from time to time (Khan, 2013).

The system of Education in Pakistan is classified into five levels: primary level comprises of grades one to five; middle, grade six to eight; high, grade nine and ten leading to the secondary school certificate; intermediate level comprises grade 11 and 12, leading to a higher secondary school certificate; and university programs, leading to a graduate degree. Parallel to these levels of education, the government oversees the public sector which administers many schools, colleges and universities along with technical and vocational training centers.

1. Teacher Education in Pakistan

In Pakistan, the pre-service/initial teacher education courses include Associate Degree in Education (ADE), Bachelor of Education (B.Ed), Bachelor of Science Education (B.S.Ed) and B.Ed. Honors. B.Ed Honors (4 years) degree fulfill the purpose of teaching to primary and elementary classes. B.Ed and BS.Ed are initial courses for secondary and higher secondary school teachers of public sector. Currently, these programs are offered by the Institutes of Education and Research (IERs) of public and private sector universities, Colleges of Education, Elementary Colleges of Education, Provincial Institutes of Teacher Education (PITEs), Regional Institutes of Teacher Education (RITEs) and affiliated colleges (Khan, 2013).

Induction is a compulsory component of all initial teacher education courses that provide the prospective teachers with an opportunity of field experience (Masood, 2011). In field experience, student teachers get practical teaching experience called teaching practice or practicum. During this phase of teaching, a student teacher becomes a visiting teacher in selected public or private school of the district where they spend a period of four weeks. Each student teacher teaches two or three subjects to elementary and secondary levels. Before teaching practice, student teachers get instruction in various areas of professional development under the supervision of teacher educators. These areas include courses on Educational psychology, Classroom management, Assessment techniques and Curriculum development. Similarly, courses on teaching methodology include Methods of teaching Science, Mathematics, Social Studies, English, Urdu (the national language), and other local languages.

Master in Education (M.Ed) is an in-service training degree, offered by the institutions that provide the pre-service training degrees and certificates.

Objectives of the Study

Since the study focuses on exploring the main barriers that prevent public sector school teachers from making their classrooms interactive, it is therefore, aims to:

- Analyze the existing teaching approaches of teachers of public sector schools;
- Examine the learner-centered approaches if any;
- Analyze the barriers that prevent teachers from making their classrooms interactive

Methodology

This study employed a mixed-methods design. The design so employed was to address the research question at different levels (Creswell, 2009). Qualitative interviews and questionnaires were the main tools of data collection. Questionnaires are one of the most efficient tools for obtaining information from respondents to describe, explain and compare their knowledge, experiences, beliefs, and practices (Gay, Mills & Airasian, 2006; Neuman, 2003). Moreover, questionnaires are used to collect data from a relatively large number of respondents (Rubaie, 2010). Qualitative data is collected through semi-structured interviews as it enables researchers in social sciences to probe for more information and elaboration of answers to the research questions (Cohen, Manion, & Morrison, 2007).

The questionnaire and semi-structured interviews were considered appropriate because this study aimed at exploring teachers' perceptions of barriers in creating interactive classrooms. The questionnaire comprised 30 questions, making three categories. Questions in the first category were related to respondents' current teaching practices, their level of satisfaction with those practices and the possible challenges they were encountering while teaching through interactive approaches. The second category comprised questions related to school environment and the prevailing strategies of teaching. Questions in the third category were probing issues like teachers and head teachers' relations, availability of resources and opportunities of in-service teacher training. The questions were translated into Urdu language for the convenience of the respondents. A selected group of teachers (five male and five female) from the sample was interviewed.

Sampling

Ten schools were selected as sample from three districts (Peshawar, Mardan, Swabi) through convenience sampling method. Furthermore, a

total number of 50 teachers (25 male and 25 females) were selected through purposive sampling. It is noteworthy that the study group was homogenous in demographic characteristics.

Data Collection and Analysis

Pre-fieldwork visits were made to the schools for research orientation and research preliminaries. Before administering the questionnaire and conducting interviews, rapport was established with the respondents. The respondents were informed that the data will be used for research purposes and complete anonymity and confidentiality will be maintained. The interviews were audio-recorded and later transcribed. The data so collected was analysed in four steps: transcription of the data; initial coding; identifying themes and developing explanations.

Results and Discussion

This section presents and discusses findings gathered from both quantitative and qualitative tools. Firstly, results of quantitative data relating to respondents' perceptions barriers in creating interactive classrooms are analysed and discussed. The next section presents findings of qualitative data. These findings have been arranged into two main themes. These themes are elaborated with relevant quotes from the data obtained from interviews.

Table 1: Existing methods of teaching in schools

| | |
|--|-----|
| Traditional method of lecture | 72% |
| Activity based approaches | 28% |
| Teachers satisfaction with traditional methods | 20% |
| Dissatisfaction with traditional methods | 80% |

The data revealed that 72% of the respondents taught through traditional teacher-led method of lecturing and dictating notes (see Table 1). 28% respondents used learner-centered approaches. The data also revealed that only 20% respondents were satisfied with their method of teaching, while 80% were dissatisfied with the traditional methods of teaching they were adopting.

Table 2: Teachers' initiative of teaching through interactive methods

| | |
|--|-----|
| Teachers' willingness for adopting interactive methods | 90% |
| Teachers who tried new interactive methods | 82% |
| Teachers with getting desired result | 72% |
| Teacher could not continue | 78% |

Table 2 shows that 90% of the respondents wanted to replace the traditional methods of teaching by innovative approaches. 82% tried to implement student-centered methods, to see if the students take interest or not. 72% respondents got the desired results; only 22% of them could continue with teaching by activities while 78% could not.

Table 3: Major constrains in the way of interactive classrooms

| | |
|----------------------------------|-----|
| Unavailability of resources | 78% |
| Head teacher role | 36% |
| Over-crowded classrooms | 18% |
| Limited time and lengthy courses | 18% |
| Colleague's criticism | 18% |

Table 3 shows the major constraints that prevented respondents from using student-centered approaches. Unavailability of resources were one of the major constraints faced by 78% respondents. 36% teachers declared head teacher role, 18% regarded large classrooms, lengthy courses and limited time as constraints, while 18% declared staff criticism as one of the big constraints.

Existing Methods of Teaching in Schools

The data revealed that 72% teachers taught through traditional methods of lecturing and dictating notes. They did not use activity-oriented approaches. The classrooms did not seem to be interactive and there was no concept of cooperative learning. Students did not seem to get enough opportunities to participate in classroom activities. For the most time they seem to either remain quiet or take notes dictated by the teacher. Most of the teachers write summaries of the lessons on board.

It is obvious from the data that most of the respondents were ready to adopt learner-centered approaches by giving up the traditional methods but the environment was not favorable. This seems in line with Ashraf et al, (2005) that novice teachers might believe in interactive teaching and activity-based learning, but might find it difficult to adopt such techniques in their actual classroom teaching. Although they were aware of the importance of activity-based approaches yet they couldn't find the school culture favorable for it.

The interview data showed that passive and old methods of teaching itself stimulate thinking about the quality of teaching and learning. As another participant shared,

The data revealed that despite the respondents' realization they could not continue teaching by learner-centered approaches. To conclude, respondents mostly taught through traditional teacher-centered approaches. They tried teaching through learner-centered approaches. However, they faced some challenges and constraints in using their preferred approaches. These constraints are discussed in detail in the following section.

Constraints in Teaching Through Learner-Centered Approaches

Participants experienced difficulties creating interactive classrooms. The major constraints emerged from the study include unavailability of resources, head teachers' role, overcrowded classrooms, lengthy courses, limited time and colleagues' criticism.

Unavailability of Resources

The data showed that a majority of the participants regarded unavailability of resources as the major constraint in creating interactive classrooms. Respondents were of the view that learner-centered approaches need resources like maps, charts, model, multimedia, projectors, good quality writing board, and adequate furniture. These factors were lacking in the schools. There was no map and globe in the Pakistan studies (social studies) classroom. For instance, one of the male teachers stated:

“Sometimes, I want to use audio visual aids, but the school has no such resources and I cannot buy myself.” (Participant 4)

The lack of resources, for the preparation of audio visual aids led participants to teach by traditional methods.

Role of Head Teacher

The data revealed that participants had limited autonomy in decision making process. They were not given leadership role. The data collected through interview, further revealed that the head teachers decided which method of teaching should be adopted by a teacher. Participants were seldom involved in decision making. For example, one of the participants stated:

“Normally decisions come from head teacher. We cannot take initiative regarding our methods of teaching.” (Participant 10)

This finding seems in congruence with Westbrook et al. (2009) who found that teachers in Pakistan have not been yet given leadership role.

Teachers, particularly of public sector follow certain patterns of teaching, set either by head teachers or by educational officials.

The data also showed that head teachers did not support the teachers in creating interactive classrooms but criticized them for not having control over classroom when teachers assigned students to groups and the voice is heard outside.

“We are instructed by the head teacher that students’ voice should not be heard outside the classroom... in my view, if discipline means quietness then it means we are destroying the mental faculties of our students by making them passive learners.” (Participant 8)

It is the head teacher who decides for the teachers to teach by a certain method in the classroom. Under such conditions creating interactive classroom environment is hardly possible.

Large Classes, Lengthy Courses and Limited Time

Large classes also made the creation of interactive classrooms difficult. Overcrowded classrooms and cramped conditions present special difficulties for the teachers (little, 2006). It takes long time to assign students to groups, set a discussion session or let every student share his / her views or make comments. As mentioned earlier, these practices were criticized by head teachers and senior staff and regarded as creating discipline problems.

18% of the respondents regarded long syllabi and limited time as a big constraint. Head teachers and other educational officials always stress teachers to cover the courses before time.

“The syllabi are long and the time is short. With large classes, it becomes more difficult to engage students in activities. In such circumstances, I prefer lecture method.” (Participant 2)

Lack of Support from Colleagues

The data revealed that due to colleagues’ criticism, many teachers gave the idea of interactive classrooms up. Teachers who tried teaching through learner-centered approaches were discouraged by their senior colleagues. Most participants stated that since senior teachers were teaching through traditional methods, they did not like other teachers to adopt learner-centered approaches (Westbrook et al., 2009). Participants shared that students were found enjoying interactive activities. When students admired the respondents (teachers) for making classroom

interactive, senior staff criticized them and took it as frankness with the students. Sometimes, teachers who created interactive classrooms were told by the senior staff that their frankness was disturbing the school discipline. Participants believed that interactive classrooms were regarded as opposition to the traditional methods by the senior teachers and that is why they did not provide any support.

Other constraints included the interference of educational officer, lack of interest on the part of community, and to some extent teachers' personal problems.

Conclusion

This study surfaced the teachers' constraints and limitations in applying the learner-centered methods of teaching in the classrooms. This study highlighted that in the public-sector schools, traditional methods of teaching are in practice; however, the teachers strongly recommended introducing innovative methods. Mostly, the existing methods of teaching that includes 'talk and chalk' method are not only outdated but also less interactive. This study shows that most of the teachers wanted to replace the traditional methods of teaching with the learner-centered approaches such as discussion methods and cooperative approaches. Additionally, the use of audio-visual aids will also enhance the student-student and teacher-student interaction in the classrooms. However, the teachers faced several challenges in using the latest technology and interactive methods of teaching in the selected schools.

The major challenges in replacing the traditional methods of teaching were lack of resources, large classes, lack of cooperation from the senior colleagues, and lengthy courses among others. Moreover, head teachers of the selected schools also resisted the newly inducted teachers' attempts to introduce the innovative and interactive methods of teaching. Westbrook et al, (2009) argue that lack of resources, external culture and community context of the schools are some of the hurdles in applying interactive methods of teaching in the classrooms. Furthermore, the data revealed that the head teachers play a crucial role in teacher's leadership as part of the whole school development process. They can develop the schools by supporting the updating of the teaching methods and introducing innovative approaches in teaching (Frost & Dureant, 2004).

This study contributes to the literature on modernising the classrooms with innovative methods and technology. It bridges the gap in the literature, which is, there is lack of case studies about the constraints of teachers regarding the application of modern methods of teaching in the classrooms in the public sector schools in Khyber

Pakhtunkhwa. This study recommends that the educational officials should assess the performance of the head teachers regularly. Additionally, in-service trainings can ensure the head teachers updating in new techniques of teaching.

References

- Ali, M.A. (2000). Supervision for teacher development: an alternative model for Pakistan. *International Journal of Educational Development*, 20(3), 177-188.
- Ali, S. & Rizvi, M. (2007). *Quality in education: Teaching and leadership in challenging times* (Ed.). Vol. 2. Karachi: Aga Khan University, Institute for Educational Development. Retrieved: from <http://ecommons.aku.edu/books/7>.
- Ashraf, D., Khaki, J., Shamatov, D., Tajik, M.A. & Vazir, N. (2005). Reconceptualization of teacher education: Experiences from the context of a multicultural developing country. *Journal of Transformative Education*, 3(3), 271-288.
- Bergman, J. & Mohammad, M. (1998). Primary and Secondary Education-Structural Issues, In P. Hoodbhoy, (Ed), *Education and the State: Fifty Years of Pakistan*, (pp. 68-101), Karachi: Oxford University Press.
- Braun, V. & Clark, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Chubbuck, S. M., Clift, R. T., Allard, J., & Quinlan, J. (2001). Playing it safe as a novice teacher: Implication for programs for teachers. *Journal of Teacher Education*, 52(5), 365-376.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research Methods in Education*, London: Taylor & Francis.
- Creswell, J.W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage.
- Dayan, U. (2005 May 5), Why are teacher failed to adopt modern teaching techniques? *Daily Mashriq*, p. 8. Peshawar.
- Hayes, D. (2006). Effective teaching: an elusive concept. *Journal of Teacher Development*, 10 (1), pp 46-54.
- Durrant, J. (2004). *Self evaluation and shared leadership for school improvement: the enquirer summer*, Canterbury: Canterbury Christ church University College.
- Durrant, J. & Holden, G. (2006). *Teaching and leading change*. London: SAGE.
- Duit, R. & Confrey, J. (1996). Reorganizing the curriculum and teaching to improve learning in science and mathematics. In D.F. Treagust, R. Duit, & B. J. Fraser (Eds.), *Improving teaching and learning in*

- science and mathematics* (pp.79-93). New York and London: Teachers College Press.
- Gay, L., Mills, G., & Airasian, P. (2006). *Educational Research: Competencies for Analysis and Applications* (8thed.). NJ: Upper Sadler River, Pearson.
- Greaney, V. & Hussain, P. (1998). Public Examinations in Pakistan: A system in need of reform. In Hoodbhoy (Ed.). *Education and the State: Fifty Years of Pakistan*, (pp. 136-176), Karachi: Oxford University Press.
- Harris, A. (2004). Successful leadership in schools facing challenging circumstances: No panaceas or promises, In J. Chrispeels (Ed.). *Learning to lead together: the promises and challenge of sharing leadership* (280-282). Thousands oaks, CA: Sage.
- Helsby, G. (2000). Multiple truths and contested realities: the changing faces of teacher professionalism in England. In C. Day, A. Fernandez, T. Hauge and J. Moller. (Eds.), *the life and work of teachers: international perspectives in changing times*, (93-108). London: Palmer press.
- Herbert, S.M. (2000). *Motivating male primary underachievers through a techno literacy curriculum*. Unpublished M.Ed thesis submitted to Victoria University of Technology.
- Human Rights commission of Pakistan (2006). Retrieved from <http://nchr.org.pk>
- Khan, H. K. (2006). Understanding a novice teacher's learning to teach in a private school for girls in Karachi, Pakistan. *Quality in education: Teaching and leadership in challenging times*, 1, (pp. 254-270). Retrieved from, https://ecommons.aku.edu/book_chapters/69
- Khan, M. I. (2005, May 15). Are all teacher training programs a complete waste of time? *DAWN*, p.25. Peshawar.
- Khan, M.I. (2013, August). *Initial Teacher Education in Pakistan: The Theory-Practice Divide*. Paper presented at Education Conference on Teacher Recruitment, Preparation, and Policy. Karachi, Pakistan.
- Kearney, M., & Treagust, D.F. (2001). Constructivism as a referent in the design and development of a computer program using interactive digital video to enhance learning in physics. *Australian Journal of Educational Technology*, 17 (1), 64-79.
- Krause, K., Bochner, S., & Duchesne, S. (2003). *Educational psychology for learning and teaching*. Australia: Nelson Pty Limited.
- Little, A. (2006). Multigrade lessons for EFA: a synthesis. In A. Little (Ed.), *Education for all a multigrade teaching: challenges and opportunities* (301-348). Springer, Dordrecht: The Netherlands.
- Masood, S. K. (2011). Comparative Analysis of Teacher Education Programs in Pakistan and UK. Unpublished doctoral dissertation submitted to Sarhad University of Science and Technology: Pakistan.

- Meadows, S. (1998). Children learning to think: learning from others? Vygotskian theory and educational psychology. *Educational and child psychology*, 15(2), 6-13.
- Mishra, R. G. (2009). *Classroom Administrations*. New Delhi: A P H Publishing corporation.
- Neuman, W. (2003). *Social Research Methods: Qualitative and Quantitative Approaches*. Sydney, Allyn & Bacon.
- Pardhan, S. & Thessen, D. (2006). The establishment of Agha Khan university – institute for educational development. In: Farrah, I., Jaworski, B. (Ed.), *Partnerships in Educational Development* (11-28). Karachi, Pakistan: Oxford University Press.
- Philips, D.C. (2000). An Opinionated account of the constructivist landscape. In D.C. Phillips (Ed), *constructivism in education: opinions and second opinions on controversial issues* (1-18). Chicago: the national society for the study of educations.
- Qureshi, R., & Shamim, F. (2009). *School and schooling practice in Pakistan lessons for policy and practice*. Karachi: Oxford University Press.
- Qureshi, R. (2003). *Gender and Education Policy in Pakistan*. Center for Policy Studies. Budapest, Hungary. Retrieved from <http://www.policy.hu/qureshi/>
- Rubaie, R. (2010). Future Teachers, Future Perspectives: The Story of English in Kuwait. Unpublished Doctoral thesis submitted to the University of Exeter.
- R.C. Mishra (2009). Classroom administration: Delhi: APH publishing corporation. UNESCO, (2008). Literacy rate in Pakistan. www.unesco.org/images/publishing/annualreport/retrievedon12/03/2010.
- Slavin, R. E. (1990). *Cooperative learning: Theory, research, and practice*. Upper Saddle River, NJ: Prentice Hall.
- UNESCO (2008). Institute for Statistics. www.en.unesco.org/country/Pakistan (accessed 10 March 2015).
- Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research*, 54, 143-178.
- Warwick, D.P., Nauman, H., Reimers, F.M., (1991). Teacher Training and school Effectiveness in Pakistan. Development Discussion paper No. 397. Havard Institute for International Development, Harvard University, Cambridge, MA.S
- Westbrook, J., Shah, N., Durrani, N., Tikly, C., Khan, W., & Donne, M. (2009). Becoming a teacher: Transition from training to the classroom in the NWFP, Pakistan. *International Journal of Educational Development*, 29 (9), 437-444.

Wells, G., & Chang-wells, G.L. (1992). *Constructing knowledge together: classrooms as centers of inquiry and literacy*. Portsmouth, NH: Heinemann.