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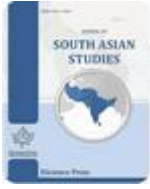
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TEACHER'S IN-SERVICE PROFESSIONAL DEVELOPMENT NEEDS ASSESSMENT–THE PAKISTANI CONTEXT

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ABSTRACT

This paper explains the study of conducting a survey to assess the professional development needs of the teachers in schools affiliated with Aga Khan University – Examination Board (AKU-EB) with the aim of strategizing and designing teacher development programmes. An online survey was carried out with questions regarding the demographic information, teachers' current practices and their professional training needs. There were 306 teachers who participated in this survey from affiliated schools from the provinces of Sindh, Punjab, Gilgit Baltistan and Khyber Pakhtunkhwa. The results show that teachers expressed a preference in using lecturing as the main teaching method and familiarity with relevant IT skills to perform their tasks to a large extent. They indicated a greater need for content-based support, different classroom teaching methods, understanding the syllabus for lesson planning, and developing classroom assessments. Particularly, they emphasized a strong need for using technological resources to improve teaching and student learning. However, they were less interested in developing students' critical thinking and in teaching students how to learn.

Keywords: Teachers, Professional Development, Needs Assessment, Teaching Practice, Pakistan.

BACKGROUND

The development of a strong educational system in Pakistan has been slow and largely ineffective over its 70-year history. There is a heavy focus on rote memorization with little value given to developing student's critical thinking. The examination systems that exist at the Secondary and Higher Secondary level perpetuate such practices by examining student's lower level cognitive skills. There are state level problems of political and bureaucratic interference and lack of accountability (Hoodbhoy, 1998). Furthermore, a significant factor is the lack of high quality teacher and staff training that is amplified by the lack of investment in teacher development (Memon, Joubish, & Khurram, 2010; Khan & Mahmood, 1997). This lack of investment is a direct result of the governments' poor budgetary allocation reflective of the low priority assigned to education. Only 14 out of 195 countries spend less on education than Pakistan (Najam & Bari, 2017, p. 49).

In addition, data from the National Education Census,

2005 indicated that a significant number of teachers in the private sector (over 50%) lacked a professional qualification and as a result were classified as untrained (Lynd, 2007).

Further, the National Professional Standards for Teachers in Pakistan, (2009) and other studies indicate that the professional preparation of teachers in Pakistan is neither standardized nor based on acceptable professional standards. Teacher education became a part of the provincial domain after the passing of the 18th Amendment in 2010. With the policy-making structure lying with each province; any potential of collaboration of Teacher Professional Development (TPD) across provinces has been omitted. Additionally, none of the programmes have been subjected to serious scrutiny or accreditation criteria (National Professional Standards of Teachers, 2009, p.7) and face criticism for lacking in quality and in meeting educational standards.

A crucial stumbling block is that an individual does not need a teaching certificate or license in order to teach as

a result of which in-service teacher training is both prevalent and necessary. A clear direction to adopt in improving the quality of teaching and learning is to improve the quality of teachers: "If the supply of educational services to children in Pakistan is to improve, teachers will have to be active participants in the learning process" (Bregman & Mohammad, 1998, p.68)

Aga Khan University – Examination Board: In acknowledgement of this need, in 2015, AKU-EB initiated its own Teacher Development (TD) Unit. The Aga Khan University Examination Board (AKU-EB) is Pakistan's first private autonomous examination body established by the Aga Khan University in August 2003 in accordance with Ordinance CXIV of the Government of Pakistan. AKU-EB seeks to address the issue of low cognitive assessment that perpetuates rote memorization in schools by committing to providing high quality examinations at secondary (SSC) and higher secondary (HSSC) school certifications across the country in accordance with the National Curriculum of Pakistan. AKU-EB enrolls students from diverse geographic ethnic, religious and socio-economic backgrounds and places emphasis on concept-based learning. Students are assessed on their understanding and application of knowledge.

Recognizing the importance of training teachers, a teacher development unit was established in January 2015 where particular focus is given to training teachers to move away from teaching for rote memorization towards, deeper understanding of concepts and higher order cognitive skills. The principal focus of this unit is to provide training and development opportunities in a variety of formats to teachers of affiliated schools across the country and develop supplementary learning materials. Additionally, Classroom Observations would take place in which in-session classes conducted by the school teachers on a variety of subjects are observed by TD Specialists and then feedback is provided on how to improve their lessons and techniques.

A specific motivation for the team was creating a professional development approach that was relevant and understood the needs of teachers from diverse contexts across the country. A needs assessment survey was conducted online with teachers, teaching at schools affiliated with AKU-EB across Pakistan to inform programme development. The purpose of this survey, therefore, was to assess the needs of the teachers with regard to development programmes with the aim of strategizing and designing relevant teacher development

programmes in the future.

The following section demonstrates the methodology of the assessments which is followed by the results of the assessments. The implications of the study duly follow.

Study Objectives: The objectives of this study were first, to explore the current practice of the teachers' pedagogical methods in the AKU-EB affiliated schools and secondly, to understand the professional development need of these teachers.

METHODOLOGY OF THE ASSESSMENT

With the objectives of the study in mind, it was necessary to conduct a need assessment to understand teachers' current practice and the types of professional development required by them. Based on the quantitative research paradigm, a cross sectional survey was developed to reach a significant number of the teachers across Pakistan as a cross sectional survey is preferable to collect information regarding the characteristics (abilities, opinions, attitudes and beliefs) of the population at one point in time (Fraenkel, Wallen & Hyun, 2012).

Tool Development: With the consideration of cost and time, an online survey was designed to assess the needs of teacher's professional development within AKU Examination Board affiliated schools. This survey tool was developed with reference to the literature and consultation with the AKU-ED Teacher Professional Development team. The tool was further validated by the AKU-EB subject specialists. The final version of the tool was completed by incorporating the feedback from the subject specialists. A small pilot study of 20 teachers was also conducted to ensure the language of the question items and time required for survey completion. The Cronbach Alpha reliability test was performed and the value of $\alpha = 0.928$ was obtained, which indicates a high reliability of this survey tool.

The scope of the survey questions contains:

Section A – Demographic information: Teachers' Backgrounds in gender, age, a current position at the school, grades and subjects of teaching, qualification, and teaching experiences.

Section B – Current Practice: Current teaching methods used and IT related skills

Section C – Teachers' Professional Needs: in the areas of *content-based support, different classroom teaching methods, understanding the syllabus and lesson planning, developing classroom assessment, using technologies to improve teaching practice and student learning* and finally *understanding how students learn*.

Sample and Sampling Methods: The sample of this study included all teachers from the AKU-EB affiliated schools as the link of the survey was sent to all teachers on the list of the system in AKU-EB. However, a convenience sampling method was applied to the actual population with the consideration of the availability and accessibility of the target population (Fraenkel, Wallen & Hyun, 2012). In other words, the sample teachers participated in this survey voluntarily when they were available and interested in completing the survey.

Data Collection Process: The Teacher’s Professional Development Survey was administered as an online questionnaire mainly. However, the hardcopy of the questionnaire was provided when the schools had difficulties in accessing the internet. The link to the survey was sent out to all affiliated AKU EB schools – 114schools on the 19th of May 2015 with a closing date of 5th of June 2015. Furthermore, an additional week was given to increase the completion rate for the survey.

Data Analysis Procedure: SPSS and MS Excel were used to carry out the data analysis. First of all, the data cleaning process was performed to identify data entry errors. As the data were collected largely online, the data entry errors were minimal. Furthermore, the descriptive analysis was conducted to explore the teachers’ perceptions regarding their current practices and professional development need by employing the statistical methods of frequency, mean and standard deviation (SD). The results of the analysis were then further transferred to MS Excel for easy formation of the

tables and graphs.

RESULTS

On the basis of the objectives outlined in the Methodology chapters, the results of the data analysis are given in this section as follows.

The Demographic Information of the Teachers (Respondents): The demographic information regarding teachers’ background was collected in Section A of the questionnaire. The following sections provide detailed explanations of the results in this regard.

Participants by Province: 306 teachers from AKU-EB affiliated schools across Pakistan participated in this survey. There is no data available about the total number of teachers currently employed at AKU EB affiliated schools. Therefore, in order to have a general idea of the response rate, a crude circulation was performed by using the number of participant schools divided by the total number of the AKU EB affiliated schools. The response rate was 25% with the majority (60%) of the respondents being from Sindh province, followed by 16% from Punjab and Gilgit Baltistan respectively and 4% from Khyber Pakhtunkhwa.

Participants by Gender and Age: Among the participants, the majority 61% (188 out of 306) of them were female teachers and 38% (117) were male teachers. The age group of the respondents was mainly from 25-31 years of age, which accounts for 46% of the total participants. Figure 1 below illustrates the age distribution.

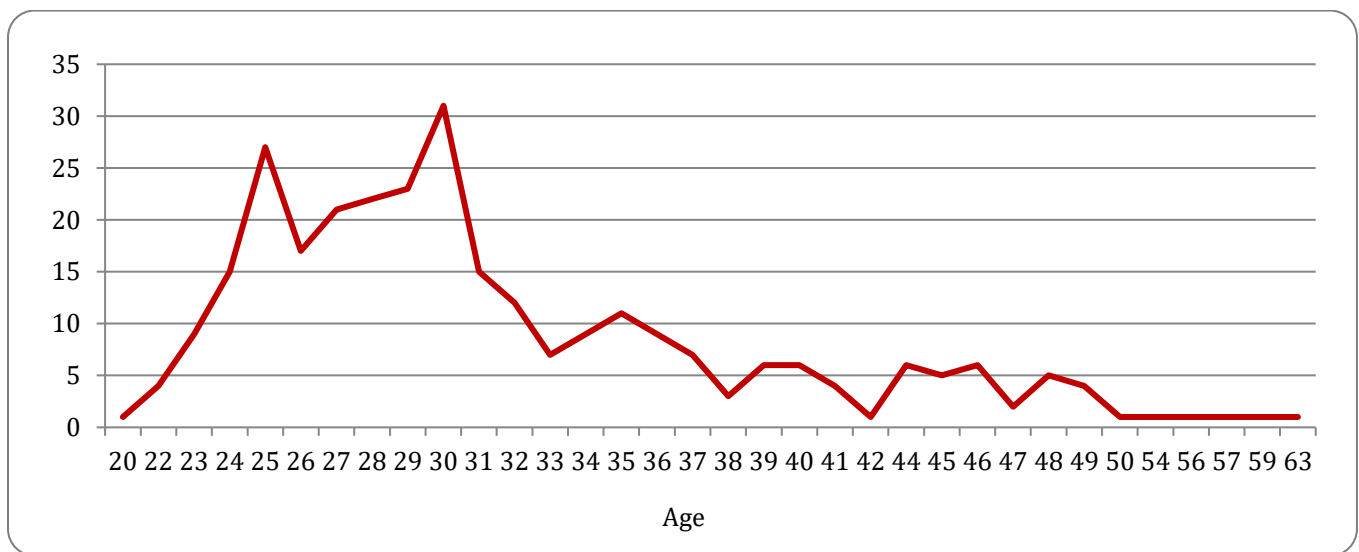


Figure 1. Participants by Age.

Participants by Qualification and Teaching Experience: Over half of the participants, 54% (165 out of 306) had teaching qualification with, 76% (126) of them having Bachelor’s in Education degree, followed by 31% (51) with master’s in education. It is important to note however that some participants had multiple degrees (Diploma, Certificate, Bachelor or Master’s in Education degrees). For those who had no teaching qualification (46%), 62% of them had a master’s degree. Figure 2 below illustrates the teaching experience of the teachers who participated in the survey. 29% of the

teachers (the highest percentage) had more than 10 years of teaching experience, followed by 27% of teachers with 3-5 years of teaching experience and 24% with 6-10 years of teaching experience. An important finding was that of class size. 30% (90 out of 306, the highest percentage) of the teachers taught 31-40 students in one class, followed by 29% of them teaching 41-50 students in one classroom and 26% of them teaching 21-30 students demonstrated in Figure 3. That is over 50% of teachers were teaching class sizes bigger than 30 pupils some going as high as 50 per class.

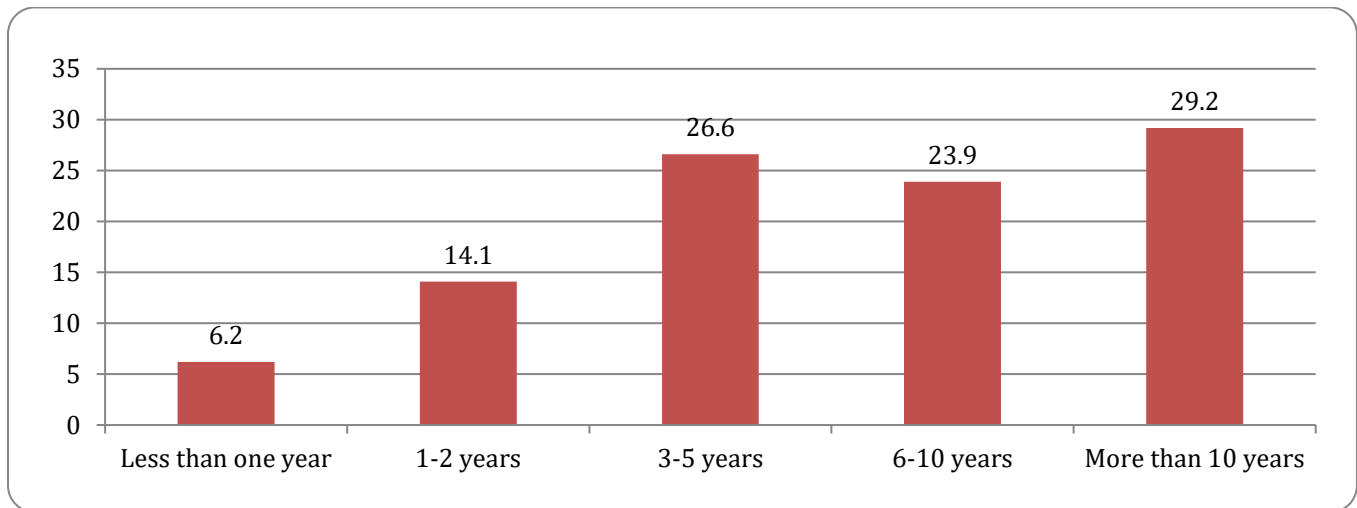


Figure 2. Years of teaching experience (percentage).

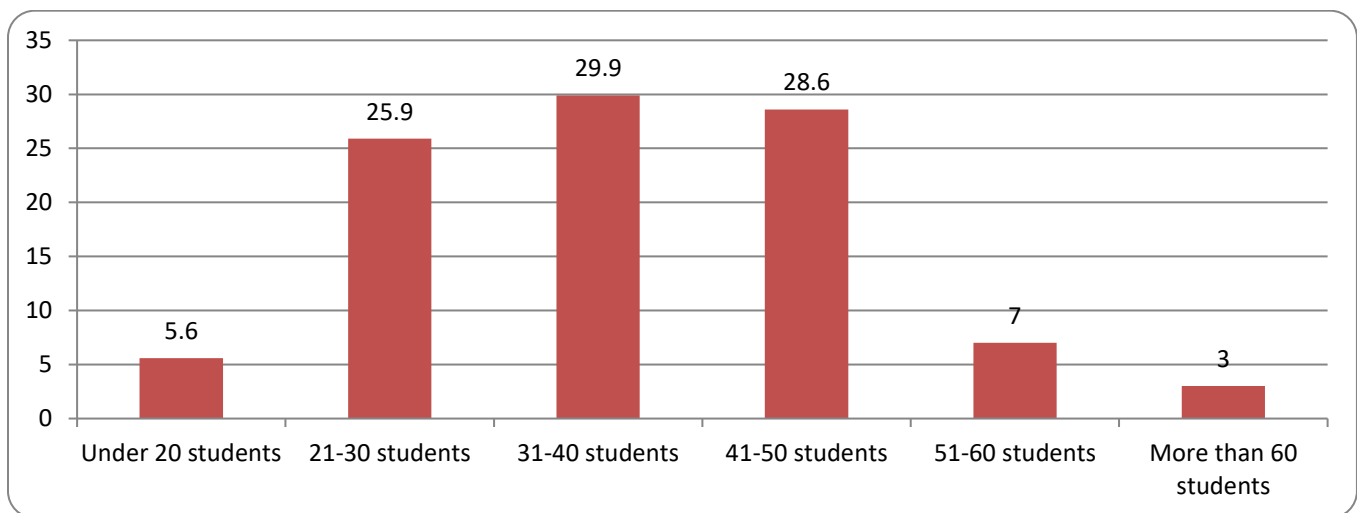


Figure 3. Number of Students per Classroom (percentage).

With the large class sizes, the workload was also high. A majority of the teachers (63%) taught more than 12 classes in a week, followed by 21% of them teaching 3-6

classes in a week. This poses important reminders on the challenges of the profession and the possibilities of innovation in pedagogy in such a context.

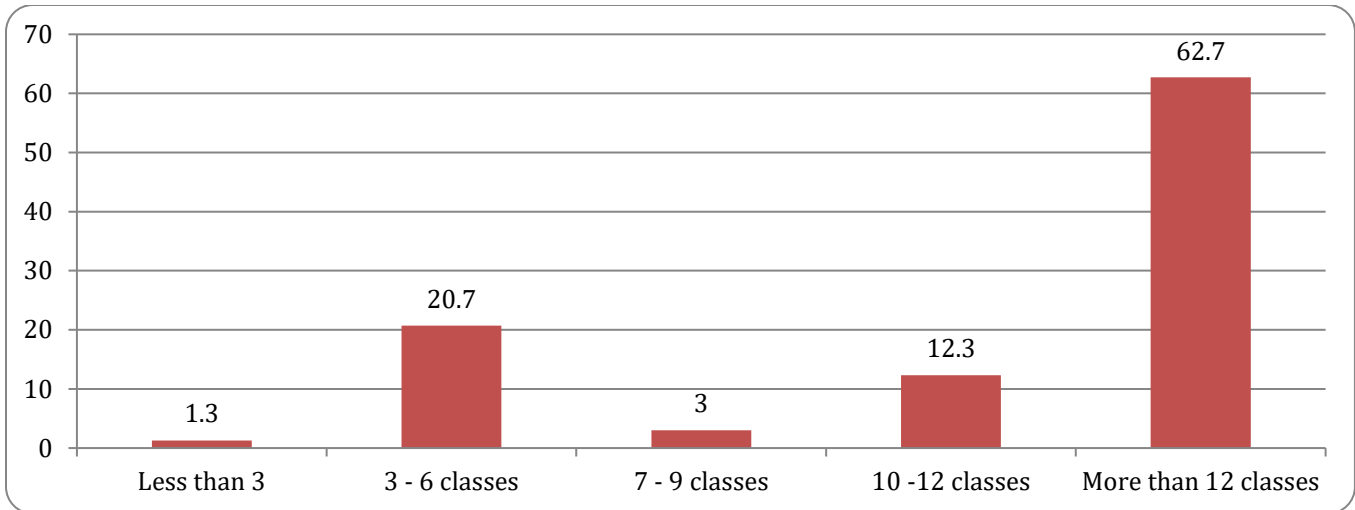


Figure 4. Number of classes taught in a week (percentage).

Current Teaching Practices: This section moves on to explore the current teaching practice of the participants (teachers) from AKU-EB affiliated schools, as well as their professional development need. In-depth explanations are presented as follows.

Current Classroom Teaching Methods: When asked

their current teaching methods, nearly half of the teachers (49%) stated that they *always* used *Lecturing* as a teaching method; 51% of them *often* used *Group work* as a teaching method; 55% of them *Sometimes* used *Project based*; 48% of them *Sometimes* used *Computer mediation*; 37% *Sometimes* used *Inquiry based*.

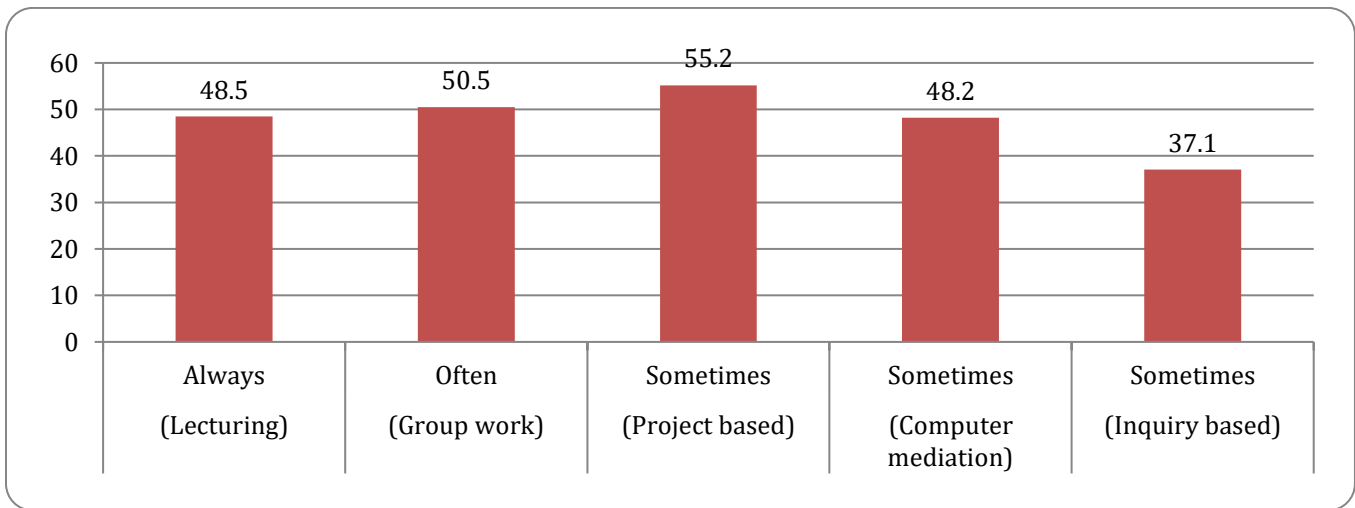


Figure 5. Classroom Teaching Methods: Answers with Highest Percentage.

The results indicated in Figure 5 above indicate that teachers who participated in this survey predominately used *Lecturing* as a teaching method and they commonly used *Group work* as an alternative teaching method. The large class sizes and the high number of classes per week could be the reason for most teachers adopting the lecture method. The lecture method is considered to be least time consuming to prepare and the easiest to

implement with large groups allowing the teacher to retain control and discipline- immensely valued in large group teaching.

IT Related Technology Skills: The majority of the teachers (57%) were *very familiar with* MS Office tools, such as Word, PowerPoint and Excel. Most of them (44%) were also *very familiar with* subject specific websites and *Skype*. They were less familiar with operating digital

devices and blended learning tool. The results imply that the participants had basic IT skills to perform their tasks but needed support for more specialized tools or programmes.

Reasons for Requiring Professional Development:

When asked the reasons for requiring professional development, 86% (the highest percentage) of the teachers stated that the reason was to gain new ideas to use in the classroom, followed by 76% for improving students' learning outcomes and 61% for improving knowledge and skills.

Professional Development Needs: The findings of teachers' needs for professional development in various areas will be explained in the section below.

Content Based Support: The survey included questions for teachers around the topics (in the subject areas that they were teaching) that they would benefit the most from extra support. They were also asked to note down the topics on which, in their opinion, students were struggling with the most. The answers for these two questions combined to inform the needs for content-based support on the topics within the subject areas for teachers and students. The responses were summarised and grouped in subject areas in this report to present an overview of the needs for extra support.

Teachers: Not all teachers responded to their specific content needs within their subjects. The most responses came for three subjects: Mathematics, English and Biology. These three subjects enlisted the highest response rate with (18%, 15% and 13% respectively).

In the English Language teachers commonly noted that they needed assistance in areas of grammar, writing and reading comprehension.

In the Mathematics subject, theorem, geometry and algebra were the most common answers with regards to support required.

Biology teachers requested assistance on topics of Inheritance and genetics.

For Students: Teachers then identified topics on which students struggle the most and in which students would benefit from extra support. Again, the subjects of English, Mathematics and Biology were the most commonly mentioned with responses for these three areas being 21%, 16% and 15% respectively.

In English topics of listening and reading comprehension, grammar and writing were most commonly mentioned. In Mathematics theorem and analytical geometry were identified as areas requiring greater focus and in Biology,

genetics, mitosis and meiosis were listed.

It is not surprising that English and Mathematics appeared as top two subjects for the needs of extra support for both teachers and students as the two highest percentages (16%) of the subject teachers who participated in the survey were English and Mathematics teachers.

The Need for Different Classroom Teaching Methods:

Overall, most of the teachers (over 40%) were *very interested* in the list of different classroom teaching methods for professional development stated in the survey. Particularly, 60% of them were *very interested* in learning *the Effective Explanations* teaching method, followed by 55% of them very interested in *Giving feedback* to the students.

The Need for Understanding Syllabus and Lesson Planning:

Majority of the teachers were *very interested* in learning various topics on *Understanding syllabus and lesson planning* (more than 58%). Especially, 64% of them were *very interested* in *Understanding the syllabus*, followed by 63% of them very interested in *Designing activities, assignments and projects to align with learning goals*.

The Need for Developing Classroom Assessment:

From table above, generally to a large extent, teachers were *very interested* in developing different classroom assessments (ranging from 41% to 61%). Particularly, they (61%) were *very interested* in learning *Classroom observations with feedback*, followed by 59% of them *very interested* in *Classroom assessment techniques*.

The Need for Using Technological Resources to Improve Teaching Practice and Student Learning:

Overwhelmingly, teachers were *very interested* in learning various topics on *Using technological resources to improve teaching practice and student learning*, especially for *Using technology to enhance teaching practice* (75%) and *the effective use of the internet* (67%).

The Need to Understand How Students Learn:

A rather interesting picture was seen for the need of teachers for understanding how students learn. The vast majority of the teachers (75%) were *very interested* in learning about how to *motivate students*, followed by 63% of them *very interested* in learning *Questioning techniques*, 61% in learning *Students' cognitive development* and 60% in *Increasing student engagement*. However, none of the teachers were very interested in learning the topic on *Developing students' critical thinking* and *Teaching students how to learn*.

Workshop (50%), Lecture (48%) and Computer based training (44%) were their top three preferences for the formats of professional development training.

Discussion of Results & Major Findings: The results of this study have been interesting in many ways and important for discourse around teaching and learning in both Pakistani contexts and for other developing countries. Foremost it is encouraging to note that teachers have an interest in and willingness to learn more about ways in which technology can be used to enhance teaching practice. Additionally, there is an interest seen in professional development opportunities in all aspects of teaching and learning including understanding the curriculum, assessment and lesson planning.

At the same time, the current practices of employing traditional methods of teaching, mainly lecturing by a large number of teachers indicate the necessity of introducing innovation in teaching practices in Pakistani Schools while keeping in mind the broader context of their practice with the large classroom sizes and the high number of classes taught per week. These challenges can pose barriers to innovation in teaching practices and need to be adequately addressed. Professional development activities designed without considering contextual challenges such as those of class sizes and teaching load can prove to be ineffective.

Furthermore, the lack of strong interest shown by teachers in learning how to develop students critical thinking skills and in teaching students how to learn is concerning. This may speak to the culture of rote memorization that does not necessitate the inculcation of critical thinking in students and also does not require teachers to help students understand how to learn. It also poses larger concerns for the educational structure and the way in which teaching and learning is being approached. Globally, there are large shifts in the educational landscape with regard to what is being taught and how. Technology has made content easily accessible; as a result, there is a demand for schools to focus on developing skills and values crucial in the 21st century. Higher order cognitive skills, competencies and lifelong learning ability have become indispensable. In light of this, these results are concerning as they illustrate the disconnect between global best practices and our local context. Further research is deemed necessary on the reasons for which critical thinking and learning how to learn are not considered necessary areas for professional development.

IMPLICATIONS

Education and thereby teaching and learning needs to be examined holistically. The Pakistani educational context is complex, without understanding the cause and effect of certain phenomena, educators and policymakers run the risk of devising programmes and/or interventions which fail to make a lasting impact. While there is a push for innovation and more student-centred teaching and learning methods, systemic challenges such as classroom sizes, workload and traditional assessment practices all present as barriers to change. This study highlights the need to circumvent these barriers before pushing for transformative teaching and learning strategies.

Interventions of any kind are resource intensive and when designed in isolation from the reality of the context in which they are to be applied, there is limited opportunity for larger impact. More largely, this study exhibits the need for professional development models that are content and context specific. Given the diversity prevalent within school systems, it is essential that a one size fits all approach is evaded and more effective models of teacher development are designed and implemented.

LIMITATIONS AND RECOMMENDATIONS

The limitations of this study are explained from the methodological aspect as well as the generalization of the survey results. Firstly, this need assessment was only studied from the quantitative research method approach to gathering teachers' general views on their professional development need. Therefore, a qualitative research paradigm could be added to explore the topic in great depth, for instance, classroom observations and interviews so that a comprehensive recommendation could be drawn to enhance the service of Teachers' Profession Development at AKU-EB. Secondly, this study did not involve other stakeholders' perspectives, such as students, parents, curriculum developers and policymakers to investigate the topic; however, the other stakeholders' views might have an impact on what is required in terms of teachers' professional development. A similar study can be conducted with other stakeholders to gather broader information regarding enriching teachers' professional development. Lastly, the findings of this study cannot be generalized to other teachers' opinions from other private schools and government schools across Pakistan. A large-scale survey can be implemented across Pakistan to understand other teachers' current practice and their professional development need in Pakistani context and this certainly

can provide information to policymakers to improve the quality of teaching and learning in Pakistan.

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