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A STUDY TO INVESTIGATE THE CHALLENGES OF PROSPECTIVE TEACHER OF MATHEMATICS FACILITIES AT UNIVERSITY LEVEL(GRADUATE)

Muhammad Yousuf
PhD. Scholar,
Department of Educational Leadership and Management, International Islamic University Islamabad

Dr. Azhar Mahmood,
Associate Professor (Chairperson),
Department of Educational Leadership and Management, International Islamic University Islamabad

S M Ishaq,
PhD. Scholar,
Department of Educational Leadership and Management, International Islamic University Islamabad

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Abstract

Introduction: *Mathematics plays a crucial role in the development of science and technology, and its importance is recognized across all levels of education. This study aims to identify the challenges related to the availability and utilization of mathematics facilities for the improvement and development of prospective teachers.*

Methodology: *The study employed a quantitative approach. The population consisted of students from four universities in Islamabad and Rawalpindi. A questionnaire was distributed to 300 respondents, with 175 valid responses collected through proportionate random sampling. The questionnaire was validated by experts, and its reliability was confirmed using Cronbach's Alpha. Data analysis was conducted using the Statistical Package for Social Sciences (SPSS).*

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Results/Findings: *The findings indicated that most respondents agreed that mathematical content knowledge significantly impacts the learning and understanding of prospective teachers. Additionally, the participants strongly agreed that practical exercises play a vital role in learning mathematics, and there is a need for curriculum-based instruction that goes beyond exam preparation.*

Future Direction: *The study recommends developing a framework to address identified challenges, enhance mathematical content, improve pedagogical approaches, and ensure the availability of up-to-date facilities for prospective teachers.*

Keywords: *Mathematics, Prospective Teacher, Challenges, Facilities, Curriculum*

Introduction

Mathematics play a key role to develop and creative the human being mind. So mathematics is considered the father of all subjects. Mathematics characteristics involves in all subjects. The initial strategy examined here focuses on the content to bridge the gap between learning and academic maths in terms of connecting these. It was before a hallmark of Klein's lecture series, where he tackled content question (Allmendinger 2016).

The understanding of mathematical knowledge as the mathematical procedures that explain how people relate the context of an issue to the mathematics and, ultimately, resolve the issue. It encompasses the capacity to apply ideas, facts, methods, and mathematical reasoning; it also involves the capacity to formulate situations or problems numerically and to analyse, apply, and assess mathematical outcomes (Imran, et al., 2023). Students should apply basic mathematics skills in order to acquire and apply the ability. The skills of math comprise the following: using formal language, procedures, and operations; using mathematical instruments; communicating effectively; becoming a mathematician; representing; reasoning and arguing; designing strategies; and using symbols. The mathematical subject matter refers to the topics covered in mathematics that are relevant for math classroom curriculum, such as algebra, quantity, change and relationship, and shape and space (Thomas, Khan, & Ahmad, 2022). We exclusively address the relational and functional aspects of algebra in this study. To integrate both mathematical literacy content and mathematics content then they should be supporting each other. Therefore, in a mathematics teaching with appropriate chosen basic competencies, one or more indicators of mathematical literacy skills involving some fundamental mathematical skills can be taught (Imran, Sultana, & Ahmed, 2023).

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Curriculum and course is thought to be the type of information and knowledge that an educator requires & use in the course of their daily teaching duties. This includes classroom management, learning and teaching processes involving classroom pupils, as well as teaching styles and strategies (Vistro-Yu, 2003). The knowledge of teaching method includes knowing and thinking the information to be read and studied also the content's proper requirements, for example, educational competency and procedures (Kreber, 2004 and Ball, Thames & Phelps, 2008). Instructional skill is knowing what and where to series education output, arrange courses, foster discussion and group work, develop assessments, and locate students through tests (Kreber, 2004).

Statement of Research Problem

Mathematics is a key component of all education field so it is regarded as a mandatory subject from class one to ten classes. There are numerous obstacles that Prospective teacher improve in this subject. Problems could be a major contributing cause to this of prospective educator of mathematical of facilities. So, there are crucial need to recognize whether there is problem or not. The intent of this present study was found out the challenges faced by the prospect teachers in the subject of mathematics with respect facility.

Research Objectives

The primary aims of the research, were to analysis the challenges of prospective teacher of mathematics facility.

1. To determine the challenges with regard to the provided facilities for prospective teacher of Mathematics.
2. To find out the basic requirement with respect to the facilities of prospective teacher of mathematics.

Research Questions

According to the objectives of study, Research Questions of the Study were

1. What kinds of mathematics-teaching facilities are available and challenges?
2. What opinions do Prospective teachers have about the tools and training for material development?

Importance of the study

This study found out to discover the present difficulties of prospective teachers of mathematics' facilities at university level, which mathematics faced and has been taught as an elective at the university level. The difficulties of future teachers of maths of facilities are

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importance to find out so that weakness and limits of math should be improving. This study also pointed out the current situation of the classroom facility and teaching role and performance of present challenges of prospective teachers of mathematics at university level. This study would be analysed the classroom basics facilities of mathematics of prospective teacher. The study's conclusions would be important for improving key resources and tools in the field of academia.

Literature Review

In regard to compare the study and have a complete understanding of the issue, It's critical to review pertinent material. Studying curriculum, instructional materials, classroom management, and physical facilities requires reading a large number of books, research reports, investigative papers, and other publications. In allied disciplines, only a little quantity of research is done (Khan, Hussain & Ahmad, 2023).

The Past background of Maths Achievement

In the classroom, math education has remained rather consistent over time. Furthermore, according to the Trends in International Mathematics and Science Study, math proficiency among US students has neither changed nor improved much over time (Bybee & Kennedy, 2005). With the implementation of the Common Core Standard in maths across most of the United States, high school graduates are expected to have successfully completed algebra I, geometry, and algebra II (Common Core State Standards, 2014). To get a high school diploma, secondary pupils must complete a higher level mathematics curriculum as well as a bigger number of courses, yet national mathematics achievement results have not risen in tandem (NAEP, 2014; Rasmussen et al., 2011). High school mathematics courses have expanded as a result of the Common Core Standards' acceptance and implementation, yet there has been no significant improvement in mathematics success scores, as seen above. As a result, the cost of math remedial courses continues to rise at the post-secondary level, extending it takes the time for students to get a grade (Rasmussen et al., 2011).

Today's Classroom Related to Mathematic

Today's classroom, the emphasis is on using demonstrate models of all sizes and shapes, slide rules, sketching tools for overhead projectors, graph paper, many kinds of pictorial and math periodicals, manipulative skills, teaching machines, and more are utilized in contemporary classrooms Within a constructivist educational setting, knowledge is viewed as a constantly

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evolving, dynamical representation of the globe by both the instructor and the students, rather than as inert facts to be recalled (Hafeez, Iqbal, & Imran, 2021). Knowledge, pupils, and learning are all based on distinct assumptions. It's important to remember, nevertheless, that students generate constructivist knowledge.

According to constructivist education, instead of passively getting knowledge, learning occurs when students actively join in an action of knowledge and meaning development. Learners are the ones who come up with new ideas and concepts. Constructivist teaching promotes critical thinking and the development of self-reliant, motivated students. In a constructivist classroom, the students are constructivist and learner-centred and the instructor review a learning method in which pupils are courage to be accountable. Within multiple perspectives and ideals, the mathematical process is interrelated. All processes are intertwined with problem resolution and communication. By using a problem-solving approach, pupils are given the opportunity to think their way to an answer or new knowledge (Phulpoto, Oad, & Imran, 2024).

Instructors encourage their pupils to make assumptions and provide verbal or written justification for their answers when they engage in reasoning. Students benefit from the communication and likeness that occurs during and after the problem-solving process because it allows them to not only articulate and develop their own ideas but also to constantly change their own techniques to formulate their response as efficient and precise as possible (Dawadi, 2005). The maths method is inextricably linked to the knowledge and skills acquired by students during the course. As learners develop the skills, information, and comprehending needed for the course, they will need to solve issues, interact, logic, look back, and so forth (Rehan, et al., 2024).

The achievement of learning outputs, the learning environment, and operating costs were a few things to take into account. Effective teaching strategies produced high-quality learning outcomes, a supportive learning environment, and reasonably priced operating expenses. (Anggrawan, 2019).

Certainly the following were some of the tools and contributing factors that enabled the student teachers in this study to elicit their methods of analysing and interpreting student thinking: (i) the mathematical modelling tasks that were used; (ii) the collaborative production of their own solutions for the modelling tasks; and (iii) the student solution papers and video episodes. When prospective teachers interacted with students' work on modelling tasks, they were able to observe, hear, and analyse the diversity in the students' thinking because the tasks had the potential to reveal

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students' ways of thinking and required the students to develop their own mathematical ideas and concepts. (Carlson, Larsen, & Lesh, 2003).

The majority of future educators reported experiencing difficulties with lesson planning, classroom management, effective teaching techniques, unfavourable administrative attitudes, school infrastructure, and community barriers. There isn't any rigorous training for practice teaching in the majority of teacher education institutes. The majority of trainees shy away from practicing teaching since they don't have a favourable attitude about it. It is also imperative that the teacher education institution encourage future educators to engage in appropriate practice teaching and foster a favourable attitude about it (Suvendu Ray al.et. , 2023).

Throughout this study, aspiring teachers identified a number of issues with gain density, inadequate lesson length, incompatibility between the central exam program and the program, reading comprehension, relating to everyday life, preparedness, inadequate economics, scarcity of resources, aversion to mathematics, peer pressure, and a lack of drive. (Yalçın Karalı , 2022)

This circumstance needs to be considered because students who practice sentence-based problem solving in mathematics are taught to be ready for every situation that arises in their daily lives. By selecting the best teaching strategy, teachers were found to be crucial in helping students overcome the obstacles they experienced in this study (Shawan, M., Osman, S., and Abu, M. S. , 2021).

This study demonstrated that the three main issues that teachers have to deal with are inadequate teaching time, low student mastery skills, and a deficiency of ICT infrastructure (Ali, et al., 2023). The teachers approached these problems with a great deal of imagination and energy, changing up their methods to help the fourth-graders become more interested in and proficient at solving sentence-based arithmetic problems. (Muhammad Sofwan Mahmud*, 1 feb 2023).

The study made clear that a lack of resources including facilities, support, and knowledge meant that prospective math instructors were not adequately prepared to teach the four Cs. According to this survey, two major issues faced by university-level teacher educators are students' ability and instructors' capability. Conversely, the main barrier at the school level seems to be pupils' aptitude and real-world difficulties. In order to give mathematics teachers, the information and abilities needed to teach 4C skills, a great deal of work needs to be done at the postsecondary level. To ensure that newly graduated teachers have the resources they need, teacher preparation

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programs must take a proactive stance in managing the admissions, curriculum, and graduation procedures (Fitriati Fitriat al.et, 15 November 2023).

The study sought to identify the features of 21st-century skill conceptions held by pre-service teachers and their alignment with current lists of 21st-century skills and 21st-century self-skills. Additionally, it sought to compare and debate these concepts in terms of curriculum and their respective disciplines (Hussain, et al., 2023). The framework for 21st century skills was used to categorize this study. Teacher candidates' understanding of 21st-century skills is demonstrated by 21st-century skills codes that include modern concepts related to subcategories like "cognitive skills," "process skills," "communication and collaboration skills," "initiative and self-direction skills," "career skills," and possess an understanding of 21st-century competencies. Additionally, the study discovered that the curricula and education pre-service science and math teachers get had the biggest impacts on their 21st-century competencies (Imran, Zaidi, & Khanzada, 2023). The premise of this study was that understanding how pre-service teachers' in- and out-of-school trainings, curricula, branches, and other experiences impacted their 21st-century skills would help shape curricula and learning environments (Mıhladız Turhan al .et, March 15, 2021).

In order to better understand how future math instructors, pick up these skills, this study examined how their planning abilities improved while they were enrolled in the lesson study as part of the school-university cooperation program (Imran, Zaidi, & Rehan, 2024). This study demonstrated how program participation could lessen the challenges faced by aspiring math instructors when it comes to lesson planning, which is categorized based on mathematical knowledge for teaching frameworks (Imran & Akhtar, 2023). The input from peers as well as close collaboration and contact between participants particularly in-service teachers and teacher educators facilitated them (Fitriati al.et, 2023,).

A more thorough description of the stages of higher order mathematical thinking that was regular, backed up by resources and evaluation techniques, was required for this study. To establish a shared understanding of higher order thinking (HOT) skills, its learning technique, and assessment characteristics, teachers required help in the form of teacher training and guidebooks, which should be equitably provided to public and private schools (Ahmed, Ahmed & Buriro, 2023). Ultimately, educational institutions can facilitate their colleagues' collaboration in interdisciplinary teams to develop and apply HOT concepts into their instructional practices. In

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our rapidly evolving, technologically-driven world, it was crucial to cultivate higher order thinking abilities in mathematics (Tanudjaya al et., May 2020).

The majority of aspiring educators believed that the learning environments developed in the course on teaching technology would improve the way mathematics is taught. Themes like "encouraging use of technology," usefulness, time-saving, visualization, lifelong learning, professional development, concretization, necessity, shared effect, awareness, amusing learning environment, conceptual comprehension, focus, and motivation were also highlighted (Timur Koparan, 2017).

It was found that grasping the locus problems with pencil and paper presents certain challenges. These challenges are: not being able to move the dots on the paper; not having a suitable shape to draw; and not having enough information to create a mathematical description (Imran, et al., 2023). In contrast to conventional learning, future teachers had the opportunity to use dynamic software to create hypotheses, alter the structure to test theories, show traces, and make generalizations (Oad, Zaidi, & Phulpoto, 2023). Using their understanding of geometry and using software presented some challenges for aspiring instructors during these exercises (Ahmad, et al., 2024). However, students were able to apply their understanding of geometry to solve locus problems, and the usage of dynamic software enabled them to apply new ways of thinking. Rather than replacing the conventional tools, dynamic geometry software adds to and enhances them. As a result, dynamic geometry software can assist educators in thinking through the most formative experiences to support students' ability to learn geometry continuously, encourage reflection on the nature of geometry, and instilling a value for mathematical knowledge in the classroom (Timur Koparan, July 2015,).

Additionally, the study showed that only a small number of mathematics labs were used for instructional purposes because their answer means were higher than the criteria mean. Low utilization of the amenities was shown by the average answer mean. A more thorough investigation revealed that students' opinions regarding the use of mathematics lab facilities for instructional purposes in secondary schools were gender-neutral. (Nwoke al et., September, 2020)

Research Methodology

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The nature of the study was descriptive and survey type in nature. The research was conducted through questionnaire. The research data were taken from IIUI and NUML Islamabad and Arid University and FJWU from Rawalpindi. The major focus of this research was to look the issues and challenges of mathematics basic requirement facility at the university level. This quantitatively study focused on the perceptions of challenges of prospective teacher of mathematics facility at university level, on how to increase a prospective teacher's mathematical ability the fundamental goal was to define, recognized, and understand the lived experience that enabled the researcher to acquire the greatest findings in terms of viewpoint. The study methodology, study participants, data collecting, data analysis, and study validity were all discussed in this chapter.

Sample size and Sampling Technique

The sample of the study consist of 175.For the selection of proportionate random sampling technique was used from four universities of twin cities including International Islamic University Islamabad (IIUI), National University of Modern Language (NUML) Islamabad, Pir Maher Ali Shah University Rawalpindi (PMAS) and Fatima Jinnah Women University (FJWU) Rawalpindi. The total response rate was 29.1%.

Table Population and Sample size

Sr. No	Institution Name	Population	Sample	Response Rate
01	International Islamic University Islamabad	200	58	29%
02	National University of Modern Language	120	32	26%
03	Pir Maher Ali Shah University Rawalpindi	160	47	29%
04	Fatima Jinnah Women University Rawalpindi	120	38	32%

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Total	**600**	**175**

Source data

In this research, both primary and secondary data were employed; secondary data was used to comprehend previous research studies connected to this research of the review of literature parts, but basic data was the primary source of the study's analysis and explanation that was completed using a questionnaire, conversation, and a form for monitoring the class.

Tools and Instrument of Data Collection

The tools were constructed based on need and characteristics of the sample chosen. The major tools: Self-made questionnaire was used to collect the data of the study.

Validity and Reliability of Research Instruments

Validity refers to a research instrument's capacity to measure what it was developed to test. As a result, validity is a measure of any kind that measures everything it's designed to measure (Merriam-Webster, 2007). Content validity was confirmed by an examination of related literature, communication with experts, and the researcher's direct interest. Cronbach's Alpha are used to determine reliability. The Cronbach's Alpha coefficient is calculated to ensure the final instrument's dependability. Cronbach's Alpha is used in combination with SPSS to test the tool's reliability. Cronbach's Alpha is 0.85, indicating that the questionnaire is trustworthy.

Likert Scale Rating

Rating Score	**Importance Level of Factors**
1.	Strongly disagree
2.	Disagree
3.	Uncertain
4.	Agree
5.	Strongly agree

Procedure for Data collection

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The researcher went to each of the universities on the list for data collection, and was followed, class observation form, as well as other assistance the university administration needs to provide the investigator. Following an explanation of the visit's goal, the investigator asked each of the university's potential instructors to complete the questionnaire completely and truthfully. The correspondence with the responders was accurately enumerated and appropriately documented.

Quantitative Data Analysis

Throughout data collection, the investigator used a quantitative approach to analyze and interpret the data. The investigator initially used tables and straightforward statistical techniques to analyse the quantitative data. Descriptive statistics were used to provide context for the data, and these analyses were partially supported by quantitative techniques for validating the data using Likert scales, coding, and categorizing as a quantitative approach to data analysis. For a useful analysis, the investigator identified and captured the central topic of the data. To determine if the statement is problematic or not, mean was employed. It is used to identify the central points on the rating scale in response to the educators' feedback (Mohammad, et al., 2024).

Data Analysis and Results

Questionnaire Survey for Data Collection

The questionnaire was using a five-point likert scale (1=strongly disagree, 2=disagree, 3=uncertain, 4=agree, and 5=strongly agree) to rank the importance of aspects that influence the facilities of mathematics. Initially, the participants were given two weeks to respond and after then, number of reminders was sent with intervals. In total (175) responsive questionnaire were received giving a responses rate of (29.1%).

Type of Academic respondents

Source of Respondents	**Numbers of Respondents**	**Percentage (%)**
B.Ed. Education	65	37%
Graduation in Education	110	63%

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Table 4.2 shows that a majority the responsive respondents were B.Ed. Education and Graduation in education (37%) and (63%) respectively.

The respondents were mainly assessed upon the academic qualification, which showed the validity of ranking of the challenging factors which affects the facilities.

The Reliability Test

The reliability analysis was evaluated using Cronbach alpha test for all the respondents on enlisted categories in questionnaire survey (challenges of mathematics facility).

Reliability Statistics of Facilities Challenges

Cronbach's Alpha	No of Items
.872	10

Challenging of Facilities; prospective teachers of mathematics

Ten Facilities Challenges and corresponding mean

Challenges in Facilities	N	Mean	Std. Deviation	Variance
Supervisions and guidance program leads to upgrade the teaching of prospective teacher.	75	4.25	0.773	0.597
By using only available teaching material difficult to completion of whole course	75	3.77	0.764	0.583
Physical facility of class room is adequate	75	3.44	0.948	0.898
Availability of mathematics laboratory/ representation room	75	3.44	1.030	1.061
Administration is managed the meaningful Mathematical environment	75	3.41	0.988	0.975
Mathematics class rooms are furnished as required.	75	3.39	1.077	1.159
Mathematics resources (reference books) are available	75	3.31	1.039	1.080

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Sufficient availability of multimedia along internet in Mathematics class	75	3.21	1.119	1.251
Computer and teaching material are available in mathematics classroom	75	3.15	1.205	1.451
Current Mathematics training and seminar are adequate for the perspective teachers	75	2.97	1.305	1.702

This identified and recognized factors are related to the challenges of facility of prospective teacher of mathematics. This factor included ten critical questions, in which first four factors are preferred and necessitated in order to the respondents.

Firstly, Supervisions and guidance program leads to upgrade the teaching of perspective teacher. Secondly, by using only available teaching material difficult to completion of whole courses. Thirdly, Physical facility of class room is adequate and fourth is availability of mathematics laboratory/ representation room. The often respondents preferred that supervisions and guidance program leads to upgrade the teaching technique of prospective teachers. In order to this, guidance and supervision are essential to push up of prospective teacher's practices. So often respondent responded about this phenomenon. Likewise, by using only available teaching material face problems and difficult to completion of whole course, therefore majority of the respondents are agreed using only available teaching are not enough to fulfil and completion of whole course. In this way the third factor analysed that physical facility and space of mathematics class room are not enough as need, mostly respondent were favour lack of physically facility. Similarly, some lower and minimum factor are like Current Mathematics training and seminar are adequate for the perspective teachers, Mathematics resources (reference books) are available, Sufficient availability of multimedia along internet in Mathematics class, Computer and teaching material are available in mathematics classroom. According to above mentioned factors analysed that mostly respondent are disagreed and strongly disagreed that there are need mathematics training and seminar, mathematics resources, the required availability of multimedia along internet in mathematics class.

Conclusion & Recommendation

Summary

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The article divided into five chapters. The organization of article was intended to address the challenges of prospective teacher of mathematics facility and basic requirement. Chapter one presented the background, research problem and research questions. In addition to the aim, objectives as discussed in the methodology.

In the second chapter, extensive relevant literature was reviewed. It also focused those various types of challenges which the prospective teachers in mathematics must face during the early years of their professional career. Moreover, the various strategies were also discussed in the chapter along the confrontation of various issues as well as challenges in mathematics. Unit three presented the research procedure engaged in the research. It also explained the questionnaire plan, its pilot research, the study's data collection method and statistical analysis.

Findings of the Quantitative Data

There were many challenges of facility factors which influenced on the learning and understanding of the prospective teachers of math's. However, after extensive literature review and questionnaire of participants' ten challenging factors were finalized.

High ranked factors were the supervision and guidelines program facility guaranteed the improvement of prospective teachers of Mathematics, available teaching material difficult to completion of whole course. These two factors have mean value of 4.25 and 3.77 respectively.

1. The factor having mean value 3.44 that physical facility of classroom are adequate.
2. There was no availability of mathematics laboratory and representation room. This factor mean value was 3.44.
3. The factors were the management of meaningful mathematical environment and mathematics class room furnished as required. These two factors mean values were 3.41 and 3.39.
4. The factors which were the mathematics resources available and sufficient availability of multimedia along internet in mathematics class. These two factors mean values were 3.31 and 3.21.

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5. In this way, the second last factors were computer and teaching material available in mathematics classroom, which mean values was 3.15.

6. Similarly, the last factor was that the current mathematics training and seminar are adequate for the prospective teachers, which mean value was 2.97.

Physical availability of classroom, inadequate availability of laboratory and only least available teaching material major impact the performance of the prospective teachers. Due to traditional approach of teaching majority of the respondents ignore the Current Mathematics training and seminars are adequate for the prospective teachers; Computer and teaching material are not available in mathematics classroom as required. The above least importance challenging factors were importance factors in developing countries.

Discussion

The main aim of this research was to explore the challenges of prospective teacher's mathematic facility at university level. The main aim of the topics was to find the challenges with respect to facility and basic requirement of mathematics for prospective teacher.

Mathematics was very important for all careers of education, science, and technology. Mathematics in most countries of the world faced several challenges. They were focusing many challenges with respect to facilities and basic requirement of prospective teacher at university level. So, the intent of this present study was found out the encounters handled by the prospect educator in the subject of Mathematics. Several investigations performed for assess what arithmetic information was necessary for future teacher. To teach topic effectively, an educator must be able to comprehend it helped students learn it, identify and interpret students' incorrect answers, evaluate alternative algorithms, understand the underlying principles of the topic, fully comprehend the meanings of terms and interpretations for the subject, and consider tactical instances to teach the subject area. The proposed study looked into in a research, prospective elementary and secondary teachers were asked about their mastery of division with fractions. Future elementary and secondary school teachers participated in the study. In three different scenarios, prospective teachers were asked to solve division problems.

Conclusions

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Below are the main points drawn from the study's findings:

1. Many of the participant's least agreed over the statement that teaching primary school Mathematics required only basic communicational skills on the part of the teacher.

2. It is depicted that most the participants strongly agreed the statement that practice has vital role in learning Mathematics.

3. It is depicted that most the participants agreed the statement that emphasize curriculum-based instruction that isn't just exam-focused.

4. It is depicted that most the participants strongly agreed the factor that effective models, strategies and practices to nurture the thinking of students about mathematics.

5. It is depicted that the participants strongly disagree the statements that students mind set about math's tend to be hindrance in learning mathematics and mathematics class teacher usually starts lesson by asking questions.

6. Hence, it is showed that the respondents agreed the statement supervision and guidance program leads to upgrade the teaching of prospective teacher.

7. It is represented that the participants strongly agree the statement that by using only available teaching material difficult to completion of whole course & physical facility of class room is adequate.

8. It is showed that the participants strongly agree the statement that availability of mathematics laboratory/ representation room. It is represented that respondents tremendously approve with the statement admiration is managed the meaningful Mathematics environment & Mathematical class rooms are furnished as required.

The majority of respondents strongly disagree the statement that current mathematics training and seminar are not adequate for the prospective teachers.

Recommendation

After the findings and conclusions of this study, the following recommendations are made.

1. It is advised that classroom facilities, instructional needs, and administrative assistance be provided to help future educators use adaptable teaching strategies in accordance with their abilities.

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2. It is recommended that the institution may take at least two initiative step to improve in mathematics practices. First teacher should be encouraged to focus on every student in the class room and also focus the entire system. The second initiative is to focus on performance of students which may encourages and correct the prospective teacher deficiency.

3. It is recommended that there may many deficiency and lack of awareness among students, teachers and parents. Owing to it, remain many challenges and problems during mathematics class.

4. It is also referred that there may pointed out the current situation of the classroom facility and teaching role and performance of present challenges of prospective teachers of mathematics at university level. In this research, the effectiveness of classroom instruction across a range of subjects will be examined. The study's conclusions could be important for improving instruction in academic institutions.

5. Training sessions, seminars, and conferences should be held by the government, non-governmental organizations, and school administrators to provide teachers with training in improvisation and the use of math lab resources.

6. To facilitate mathematics instruction and learning, the government should set up math labs, and facilities in university for both instructors and students to use.

7. It is recommended that there may need to update and improve the of ICT with respect to challenges facilities of mathematics of prospective teacher at university level. It may create a pleasant relationship between the teacher and the students, as well as to develop a pre-planning and teacher confidence.

8. The prospective teacher may be given proper training of mathematics teaching before joining the teaching profession so that they may be able to tackle the challenges of mathematics facilities in early years of their profession.

9. Assist the aspiring educators with setting up all the necessary spaces for them to plan their internship activities.

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Future Research Recommendation

1. A sample of each method's lesson and unit plans will be provided by the training centre.
2. It would be better to extend the practical teaching period.
3. Ideally, the B.Ed. program's last semester would include the practice teaching.
4. Near the student teachers' residence, the teacher education institute ought to designate a school.
5. Every week, the supervisor ought to come to university.
6. For aspiring teachers, university ought to be more open and communicative.

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