Global Journal for Management and Administrative Sciences
ISSN (P): 2788-4821 & ISSN (O): 2788-483X
Volume 2, Issue 2, Page 83-96, December 31, 2021

EFFICIENT MATHEMATICS TEACHING AND DEFICIENT REQUIRED RESOURCES

(A Case Study of District Panjgur)

Khalid Adam
Teacher Trainer
College of Elementary Education, Panjgur
bvision4u@gmail.com

Abdul Nasir Kiazai
Assistant Professor
Institute of Education and Research, University of Balochistan
mirnasir555@gmail.com

Shakir Adam
Lecturer
Department of Humanities,
Lesbela University of Agriculture, Water and Marine Science, Balochistan
Shakiradam1988@gmail.com

Abstract

The paper examines the relationship between efficient mathematics teaching and deficient required resources in district Panjgur, Balochistan. In today's world of highly enhanced fields, especially in science and technology, it is impossible to march on the road of success in the absence of resources, commitment, dedication, and the urge to seek knowledge without any cultural or theological influence. The purpose of the paper is to highlight the factors which are hampering effective mathematics teaching in the high schools of the research area. In addition, it discusses the reasons for the failure of mathematics teachers in arranging the mathematical activities in the high schools in district Panjgur. Education is the most important factor for the progress and prosperity of any nation. Mathematics as a subject fascinated the mind and sharped analytical skills and vital for success of students in their future accomplishments. It plays a significant role as a subject for creating human resource, which are essential for the progress of any nation. The study has underlined the aspects which hinder the rapid up-gradation of mathematics as a subject and the traditional limitations associated with remote areas in classroom teaching.

Keywords: Education, Mathematics, Assessment, Monitoring, Teaching, Deficient, Resources

Introduction

The best quotation about the vitality of education is that it immortal and stay with an individual for the rest of his life. The determination and connectivity with education can never be broken as the bond is of soul. When humankind was under the shadow where ignorance was blessed, and logic was countered to the core. Human society was full of impatience, and even common concerns were settled by force and cohesive means. It leads

This work is licensed under a Creative Commons Attribution 4.0 International License.

toward a declined and compromised society as things were not decided in a précised way. The scenario was tense, but at the same time, some individuals were making progress and challenging the prevailing circumstances. They countered things and phenomenon which were not reflecting logic. The journey was a slow one and continued for years after years, yet it was slow and subtle progress.

Humankind progress multiplied and gets multifold when they learned to pass life as a community. The family was the first unit and the oldest institution developed by humankind and is still relevant in most areas across the globe. When humans settle in specified areas and get free from traveling and other pressing issues like food search as a fruit for the settled life, they developed institutions where various aspects of their social and political life get developed. Education remains with humans from day one when distinguishing between bad from the good and a logically sound option from a vague one. Education as an institution was established when the settlement was achieved. As one utilizes earning, humanity proved to be the mark of various natural and artificial challenges. The perpetual progress continued, and after the repetition of dawn and dusk, somehow today's life from facilities and comfort point of view is at the peak. Education can be formally defined as “Education is the socially organized and regulated process of continuous transference of socially significant experience from the previous generations to the followings” (Naziev, 2017).

Mathematics is a subject that sounds the most natural one as the value can never be undermined, nor can the subject be overlooked. The famous quotation that nature communicated with humankind in the language of mathematics as countless mysteries were solved and riddle unleashed using mathematics (Stadler-Altmann, 2015).The logical subjects have some requirements as the outcome will be compromised if all the criteria are not met and correctly invoiced. Unlike other subjects, especially social sciences and literature, mathematics can be understood with discussion only there is experimental part adherence to which is integral, and any deviation will lead towards stagnation and horrendous learning. The second important one is that mathematics is a linear subject where any topic will specifically have a one-time link, and thus, the linear attitude cannot be ignored.

The definition of education compacts some critical points of education, which comprised the feature that education is socially organized and thoroughly planned in delivering techniques of the previous generation (Teachers) to the present or following generations (students). It is of prime integrity and keeping the ahead definition a topic that identified educational constraints in one of the primary subjects at Baluchistan area of Pakistan and how they can be addressed.

Pakistan is a developing country with not so impressive record of having brilliant economic performance in the past two to three decades. Amidst such declined show it will have drastic impacts on the education sector as well. Pakistan’s budget for education in the year 980 billion rupees saw more than 222 percent. (Institute of Social and Policy Sciences, 2019) The figures may seem to represent a handsome amount, but it is a small ask as it is less than 2 percent of the total budget. In addition to it, the lion's share of the

ISSN (P): 2788-4821 & ISSN (O): 2788-483X
Volume 2, Issue 2, Page 83-96, December 31, 2021

allocated budget is directed to all readily prescribed expenditure, and only fifteen percent of the total budget is allocated to innovation or new experiences (Institute of Social and Policy Sciences, 2019).

It is a staggering and dark reality that Baluchistan is at a relatively low position on the raking of development, infrastructure, resources (exploited one), and law and order among all provinces of Pakistan. This low ranking on the Human Development Index threatens the overall progress, but specifically, the education sector is at alarming declination. The stats will clarify how dismal the education sector spending is in the education sector for the last few years and how transverse the effects are on the economy (Amir, 2017). The literacy rate even in the 21st century is at a dwindle pace at only 55 percent is the literacy rate (Daily Baluchistan Express Quetta, 2020), while Sri Lanka, a country having less area than Baluchistan with tense law and order situation, remains 96 plus percent literate and that is a remarkable achievement under rebuff resources (UNESCO, 2018). The situation is on the worse side as more than two classes to share a room due to the absence of proper infrastructure, which badly affects the educational up gradation (Daily Baluchistan Express Quetta, 2020).

Studying the Human Development Index (HDI) of Baluchistan province will provide a crystal-clear picture of the prevailing educational status. Baluchistan overall and Panjgur in specific means is at one of the most declined position. Baluchistan stands at a low ranking with points score of 0.450 and is just above the FATA, which previously was almost an outlaw area. (Bari, 2017) The lowest district in terms of the Human Development Index also belongs to Baluchistan districts Awaran. (Bari, 2017) Some of the triggering examples are that District Awaran lacks the basic facilities. In Panjgur, there are only two high schools where one is primary and the second one is of girls. Now, what will be the practical outcome of the education at Panjgur? Thus, the educational outcome will be stagnant and least progressive.

As in Pakistan, students appear for a degree after nine years of education, and then in the following years, the challenges to such students are first among equals. The mathematics part of 9th and 10th class consists of the geometry and drawings portion, which is practically part, and due to the challenging environment, the education will not be of any reasonable value. The possible challenges to teaching mathematics at districts Panjgur is as follows:

A peaceful and progressive loving environment is he first asks for any of the up gradation. HDI ranking District Panjgur is 114 rankings where the surrounding will not be ideal. Bari (2017), Among the provinces, Baluchistan is the worst because the average education is 2.7 years, the least one can expect. In addition, the role of the environment is also unavoidable, and in case of any compromise, the outcome will not be a satisfactory one. A case study of mathematics study in Nigeria conducted that environment is directly linked with study outcome. The environment includes furniture, ventilation, and thermal comfort as the absence of any will lead to stubby progress and output. (Ado, 2015)

Now being at the lowest possible rank in the District Rankings, Panjgur lacks all the above-mentioned required traits. It makes mathematics a gigantic task that may prove a utopian dream, so he roadmap towards progress, which will be a bumpy one. Like other social sciences or literature, the mathematics subject is never stagnant as there are continuous outcomes and enhancements. Thus, regular training and exposure to such a rich environment are required where the teaching staff must learn about the updated version of knowledge and result-oriented techniques. (Pavleković, 2013) Unfortunately, province Baluchistan did not have any developed mechanism where things are a bit patchy, and teachers are stagnant in education and training. The lack of training did not provide any opportunity to compete against developed area schooling, and the quagmire id deepened for Baluchistan. (Daily Baluchistan Express Quetta, 2020)

One of the most impactful sides of teaching, which often gets ignored, is the teaching methodology, leading to a communication gap between teachers and students. (Macutay, 2020). Unfortunately, the teaching community is deprived of training in District Baluchistan, and they did not develop the proper mechanism for educational gradation. Without such techniques and methodology, it will be impossible to have educational enhancement and specifically mathematics that cannot be taught nor addressed by cramming an outdated mode of learning with the conventional set of methodology.

Another point of concern is that Baluchistan and Panjgur society is backward and traditional-driven, and asking the question is sometimes synonymous with disrespect. It is one of the hindmost causes of to learn and the reason is a declined one. The questions unaddressed will lead to confusion and blur the understanding of a student. That is also a part of the environment to ask questions and argue about any mathematical problem. (Cross, 2007). The overall environment not to ask what is delivered and accept without questioning also contributes to declining mathematical teaching.

The most prominent point that needs to be highlighted is that teaching is only highly effective if backed by proper resources. Then, moving towards mathematics as a subject, the outcome has compromised as the area under consideration lacks District Panjgur of Baluchistan province a. The human development index at Baluchistan is staggering; the position at Panjgur cannot even be imagined. (Ahmed, 2017). Thus, the study has point out areas that are low and declined on education terms. In addition, the most drummed point in this study is the area of what possible hurdles the mathematics as a subject face due to lack of resources and how they can be tackled.

Research Questions

The question asked in this study will highlight the missing links and how in Panjgur districts, the educational achievement gets dwarfed as Mathematics, one of the primary subjects, is compromised.

1. Are Mathematical and the requirements of this subject fulfilled? If not, what are the possible outcome of maltreatment of the mathematics subject and subject specialist?
2. What are the factors responsible for the failure of mathematics teachers in arranging the mathematic activities in the classrooms?

ISSN (P): 2788-4821 & ISSN (O): 2788-483X
Volume 2, Issue 2, Page 83-96, December 31, 2021

3. What are challenges mathematics teachers face while preparing activity-based lesson plans in high schools in district Panjgur?

Research Objectives

The highlighted version of the research study is to propose what shortcomings are in teaching mathematics at District Panjgur and what must be the way forward. Thus, a concrete proposal is provided by discussing all the relevant fields and where things are messy, which halts the progress in the field. Thus, addressing those issues would lead towards more inclined progress and overall uplift of the mathematics subject.

Literature Review

It is important to examine the relevant literature to compare the research, which clarifies the subject concerned. Many books, academic notes, research papers, and other booklets on curriculum teaching techniques, learning tools, maintenance of the classroom, and physical facilities must be checked.

Ubben and Hughes (1989) illustrated Edmonds' finding that certain poor schools here and there with good headteachers but lower a successful school with a bad headteacher is identified. Study in all countries was concerned with the value of school leadership for schools' success and development. Many governments and educational programs have modified curricula from time to time, stressing the importance of the path for the consistency and growth of schools. International scholars and professionals in education performance and growth have continuously stressed the essential role of school leadership in developing schools (Drysdale, L. B. Gurr, D. and Mulford, 2005).

Good leadership has been described as one of the most critical reasons for efficient and productive schools (Townsend, 2007). The consistency of the leadership in a school was found by Kington, et. at. (2006) as a significant factor influencing teachers' engagement and their willingness to continue or quit a school. (Hopkins, 2001) claimed that leadership success positively improves schooling and learning. It is said that the leadership of the schools has an important influence on school success and improvement.

Similarly, a wealth of data reveals the important influence of school leadership on students' performance. Harris, et al (2006) and Ainley (2005) found out that directors play a critical role in developing environments that stimulate skilled teachers to enhance their sense of effectiveness and values that can affect students' learning. Despite the value of leadership for schools and improvements, scholars still think that successful leadership and leadership are more effective in improving schools. Leithwood (2003) discussed, Effective management by managers and other high-level workers in developing countries raises significant issues, however, regarding the essence of school development more broadly and how good leadership and leadership may relate to the improvement.

These models, built on general principles of "transformational" leading and instructional ideas regarding leadership (Southworth, 2002), emphasize the leadership role

of developing a vision for the school that is typically based on improvements in teaching and learning and successfully inspires more individuals to fulfill this vision. Some foreign studies beyond education show that transition attributes in most cultural contexts are regarded as core aspects of "good" leadership. (P.J., Ruiz-Quintanilla, House, R.J., Hanges, S.A., Den Hartog, D.N., & Dorfman, P.W., 1999). Indeed, leadership appears to be a culturally neutral concept. Many authors on the educational structures in developed nations have voiced serious concerns on whether representatives at their schools in several countries are or should be able to do so successfully. (Memon, 2000)

The explanations are distinct. One of the above is the extraordinarily centralized and hierarchical processes and legislation that control most educational programs, particularly those in the government sector. Another is the limited knowledge and socialization of many teachers and directors. Another applies to national cultures which may foster reliance, self-government, and risk aversion. (Shaw, 1998)

Ribbins & Gronn (2000) proposed various ways of exploring headships: subjective representation of human representatives centered on their accounts; different viewpoints of headset members; and details on the actions of heads drawn from tracking and other results. We performed two headship studies in Pakistan. More broadly, the Heads of Government found themselves far less free to control than the NGOs. This was partly attributed to actual power disparities, as mentioned above. However, beyond that, it emerged that the representatives of government had less chance to show "performance effectiveness," that is, a feeling that "they can improve student achievement through their actions." (Chapman, 1994)

In the last decade, there has been a revolution in tracking and evaluating the reform of the world's education sector. While the developed world took a fresh leaf, vigorous measures were introduced to regulate the education system. On the other side, various studies and experiments were conducted to explain and render surveillance more efficient and profitable. (Gage and Dunn, 2009) describe monitoring as a 'systematic method of knowledge gathering, review and use in monitoring the success of a program in achieving its goals and directing the decisions taken by management. Monitoring is generally focused on procedures such as when and how, who produces them and how many persons or organizations they enter."

Hard to reach the parents' terminology used in a research study conducted by (Crozier, 2007), in a brief discussion of the home-school relationship with particular reference of Bangladeshi and Pakistani parents. It is stated in the current study that south Asian parents are considered as hard to reach by teachers, headteachers, and educational professionals, which was somehow cleared by the parents themselves that they knew very little about their children's activity and their involvement in school. They were also unaware of the education system of their country. However, the respective work showed more concern about the reasons behind the question, i.e., 'why are the schools hard to reach'?. The research was based on a qualitative study accompanied by parents' views and their roles in educational terms, students' perspectives, and teachers' views, from primary

ISSN (P): 2788-4821 & ISSN (O): 2788-483X
Volume 2, Issue 2, Page 83-96, December 31, 2021

schools to secondary schools and from post-compulsory education to a higher education level 2 years duration of the current study.

A research report examined the effective leadership activities of headteachers for secondary education reforms in Pakistan. (Salfi, 2011) Strong leadership considered to be the essential factor for the success of the school. The research underlined the theory of Edmond that there may be just a few bad schools with successful headmasters, but never an efficient school with weak headmasters. The importance of good leadership is considered the key to any school's effectiveness, but the standard of good leadership has not been fully justified yet. The said study aimed to recognize a headmaster's good leadership practice by analyzing headteachers from 351 secondary and 702 elementary schools. The data had collected from headteachers, students, parents, and teachers by taking their interviews, distributing questionnaires, examine the documents designated school's achievements and student's participation, with the study of related review literature.

Given this literature review, it is evident that fruitful and successful schools are connected to the efficient leadership activities of senior teachers. It is important in various contexts to recognize the good and efficient leadership strategies of headteachers. Therefore, the researcher wis planned to recognize the leadership strategies of effective high school teachers in Pakistan. The key objective of the report is to contribute to knowledge and appreciation of good leadership techniques & determine the challenges faced in schools using literature review and data obtained in this analysis.

Methodology

This research aims to recognize problems confronting high school teachers in monitoring mathematics activities in district Panjgur, Balochistan.

Sampling

The research community implies the category of citizens chosen for the research sample (Ary, 2009). The population or “target group” of this study would be selected from different high schools in district Panjgur, Balochistan.

Research Design

A case study design and qualitative approach are used to determine the Challenges faced by Mathematics Challenges Faced by High school Teachers in Monitoring Mathematics Activities of Matric Classes in District Panjgur, Balochistan.

Instrumentation

This qualitative case study uses in-depth conversations with math teachers. Focus group meetings with instructors of mathematics are also included. Focus groups must first be addressed to collect basic knowledge and later carry out detailed interviews to gain more in-depth information. (McMillan, 2010) indicates that discussions of a focus group

are necessary to collect knowledge on a general interest context. The key benefit of integrating the two data collection tools was that detailed interviews enabled sensitive details to be gathered during groups of participants on the general questions to be dealt with. These two instruments allowed space for data inspection and balance. (Johnson, 2011) points out that community meetings alongside detailed interviews include one of the key types of interpretative and empirical data streams in qualitative analysis.

Data Analysis

The collected data were analyzed. The researcher used the questionnaire form of Focus Group Discussion and In-depth interview schedule were used by the researcher for the purpose of the study, the different questions were asked to the teacher. The collected data were analyzed according to the purpose of the study

Results

The collected information is categorized into different views in the text of the interview and an observation note.

Challenges do mathematics teachers face while preparing activity-based lesson plans in high schools?

All the Mathematics Teachers who participated in this study indicated the challenges faced by high school teachers during class 9 and class 10 mathematics activities in boy high schools. All Mathematics Teachers cited these challenges, which discourage Mathematics Teachers from Professional Development and the role of school management.

The Mathematics Teachers who participated in the study revealed that Professional Development, such as an opportunity to participate in the interactions, workshops related to the subjects' matter, Training opportunity, Time to study about related literature, an opportunity for higher study, information about new instructional techniques and invention were the major obstacles to providing good teaching performance.

All Mathematics teachers noted that the role of school management influenced their teaching performance. This included beliefs that other subjects' teachers would dominate on Mathematics subject which led to poor teaching performance; caused anxiety and discouragement among mathematics teachers.

Obstacles are responsible for managing the required resources for creating mathematic an activity in matric class.

The Obstacles which are responsible for Mathematics Teachers was seen to have a significant influence on teaching performance. Most Mathematics Teachers indicated that the proper space to demonstrate instructional materials, Teaching machine and computer available in the mathematics classroom, Reference books and magazines

ISSN (P): 2788-4821 & ISSN (O): 2788-483X
Volume 2, Issue 2, Page 83-96, December 31, 2021

availability, instruments for making mathematics teaching enjoyable, standard time in schools necessary to teach mathematics, room equipped with a graph board and bulletin board are the obstacles in the classroom activity.

Factors are responsible for the failure of mathematics teachers in arranging the mathematic activities in the classroom.

The findings from this study revealed that there are difficulties in classroom management due to individual difference, different intellectual abilities, and age, issues on teaching mathematics because of difference in social, cultural, and family environment of students, issues to understanding mathematics using the English language, problems in teaching mathematics due to poor mathematics background of students at high school level, issues in classroom teaching-learning activities due to large class sizes, issues in motivating students due to passiveness reasoning and creative thinking and have confidence in ability.

Discussion

The aim of this study was to establish the challenges faced by high school teachers in classes 9 and 10 monitoring mathematics in Panjgur. This section discusses the findings in relation to the objectives of the study, namely to determine the extent to which the following factors influence the teaching performance of mathematics teachers: challenges do mathematics teachers face while preparing activity-based lesson plans in high schools, obstacles are responsible for managing the required resources for creating mathematic an activity in matric class, factors which are responsible for the failure of mathematics teachers in arranging the mathematic activities in the Classroom and the mathematics teacher acquire proper conclusion and results to provide useful and productive learning.

Professional development is regarded as teacher development. Different views towards teacher can be found 'Teachers as learners' (Fullan, 1991), 'Teacher as a content knowledge expert'. (Calderhead, 1994) From the field study, it has been found that most of the teachers were facing problems in professional development. Teachers accepted on lacking training opportunity to update their knowledge and skill. The statements of teachers show that this is firmly in favor of the problem for teachers. Baluchistan is a developing province, and most of the government schools are opened without sufficient resources. So, it is challenging to develop and innovate new instructive technique itself. But teachers are also far from access to new instructional techniques. Sometimes teachers could not be confident while teaching. Likewise, teachers had accepted that they don't have the opportunity to participate in interactions, workshops, etc. to become skilled.

The report (UNESCO, 2014) highlights the fundamental challenges faced in monitoring schools' mathematic activities. The report signifies the 'teachers' as the main derive behind "positive and sustainable development of education system," and lack of proper guidance and knowledge among teachers is the main factor behind these challenges. According to this research, the OECD (201) report further rectifies these

findings; teacher's quality plays a significant factor in determining gains in student's achievement.

Unlike other subjects, mathematics learning also requires an application, and the applying part is the central part of the subject. Any limitation on the practicality part will for sure have limitations in understanding Mathematics correctly. (Department of Developmental Education, 2020) Thus, the importance of proper environment and infrastructure is stamped. In the absence of proper surroundings, the outcome will be compromised.

It was concluded that successful schools' headteachers shared the common vision of cultural collaboration, trust, and support. The concept of distributing leadership empowerment across the school, the involvement of stakeholders in making decisions, and maintaining the ideal interactions between the school community's various staff with the involvement of parent's interest, considered to be very effective and essential key factors for the success of the school. The current research study provided an idea for educational policy developers and administrators to better school performance throughout the country. Besides, many other effective strategies are also mentioned for achieving excellent leadership skills in current work.

Leadership effectiveness regarding school success is considered a very interesting research topic for Western researchers. However, in developing countries like Pakistan, a good headteacher's performance in school improvement aims to study for a research work conducted in Karachi, Pakistan by (Simkins, 2003). The study's goal is to explain the leadership and future applicability of educational teachers in developed countries, such as Pakistan.

In developed countries, the educational system is so developed because of the efforts made in top to down system-wide management strategies applied rather than focusing the management system organization at the individual school level. Such a system-wide management strategy is considered to be more effective for maintaining the discipline of economic planning. Furthermore, it has emphasized in the study that quality of education is mainly based on how school managed, more than the affluence of available resources, and the role of the headteacher greatly influences the teaching and learning capacity in schools. However, there are many education-enhancing systems in Pakistan, such as the public school system, in which the majority of students are educated, is somehow similar to many Asian developing countries.

Furthermore, the government system faces more challenges and financial issues in Pakistan with providing very low quality of education, in the last two decades, private leaders that provide education in urban and semi-urban areas have also established private school sectors. The poor monitoring and political selection of headteachers is mainly responsible for the low quality of education in government and private school sectors. In the current study, the conclusion was made by taking interviews from six headteachers to indicate the importance of different educational systems in Pakistan. Three comparative

ISSN (P): 2788-4821 & ISSN (O): 2788-483X
Volume 2, Issue 2, Page 83-96, December 31, 2021

case studies in current work indicated national culture as an essential variable that affects leadership behaviors.

Conclusion

In a nutshell, what is significantly vital is the point that education and to mention in a particular category the outcomes of such watertight and ill-equipped environment will be drastic for the mathematics learning. It will be enhanced and widened the gap between District Panjgur of Baluchistan province and other areas of Pakistan. The output and education acquired will not be up to the mark, and thus, the district inhabitants will not be able to compete. Thus, a mechanism should be developed where proper budget allocation, access to technology, question-asking culture, exposure to the latest technology, and proper training regularly for the teachers will enable them to teach mathematics as a subject and have sky heightened results if things prevail in the present scenario, only dark awaits and further declines mathematics subjects' learning.

Recommendations

More research is needed on the primary, college, and university level teacher problem of teaching Mathematics. However, this research spelled out the current situation of the high school level teacher's teaching problem by using the problem-solving method in Classroom. Based on the finding and the conclusion from this study, the following recommendations were developed.

1. The administration should manage the meaningful Mathematical environment.
2. The school should manage the mathematical lab, materials, and computer.
3. The trained and skillful teachers could be selected without any bias by the political.
4. Mathematics teachers should be responsible for the future of students.
5. Focus on curriculum-based teaching, not only exam-oriented.
6. Classwork and home assignment should be checked day by day.
7. The teacher should not be entered into the mathematics classroom without materials and pre-plans.
8. The teacher should be used the child-centered, demonstrative, and participatory method, the traditional lecture method.
9. Mathematics class should be fulfilling by graph board and bulletin board.

Training and seminar should be conducted for the mathematics teacher. Study on using different teaching-learning modules should be carried out to be effective, used in classroom teaching, and easiest way to introduce reforms in mathematics teaching.

References

Ado, T. (2015). Influence of Learning Environment on Students' Academic Achievement in Mathematics: A Case Study of Some Selected Secondary Schools in Yobe State – Nigeria . Journal of Education and Practice, 1-5.

Ainley, J. F. (2005). "Schooling issues digest: student motivation and engagement". Available at: www.dest.gov.au/sectors/school_education/publications_resources/profiles/schooling_issues_digest_motivation_engagement.htm.

Ahmed, M. a. (2017). The Political Economy of Development: A Critical Assessment of Balochistan, Pakistan. Munich Personal RePEc Archive, 1-22.

Amir, O. (2017). State of Education in Balochistan: Capacity Gap Analysis for Policy Making". Plalnetwork, 1-9.

Ary, D. J. (2009). Introduction to research in education. 8th Edition. Belmont, CA: Wordsworth Cengage Learning

Bari, D. A. (2017). Pakistan Human Development Index Report 2017 Team. Islamabad: UNDP.

Calderhead (1994). "Competence and the Complexities of Teaching." Mimeo. ESRC seminar on Teacher competence.

Chapman, D. &. (1994). How headmasters perceive their role: A case study in Botswana. International Review of Education, 40(6), 401–419.

Clements, M. A.; Ellerton, Nerida F. (1996). Mathematics Education Research: Past, Present and Future. United Nations Educational, Scientific and Cultural.

Crozier, G. a. (2007). "Hard to reach parents or hard to reach schools? A discussion of home—school relations, with particular reference to Bangladeshi and Pakistani parents." . British Educational Research Journal 33(3): 295-313.

CROSS, D. I. (2007). creating optimal mathematics learning environments: combining argumentation and writing to enhance achievement. getd, 1-211.

Daily Baluchistan Express Quetta. (2020, July 18). Education in Baluchistan- Problems and Solutions. Daily Baluchistan Express Quetta.

Department of Developmental Education. (2020). How Maths is Different from Other Subjects. Alaska: University of Alaska Fairbankd.

Drysdale, L. B. Gurr, D. and Mulford,. (2005). Successful principal leadership: Australian case studies. Journal of Educational Administration, Vol. 43 No. 6, pp. 539-51.

ISSN (P): 2788-4821 & ISSN (O): 2788-483X
Volume 2, Issue 2, Page 83-96, December 31, 2021

Fraenkel, SR. & Wallen, NE. . (1996). How to design and evaluate research in education. . New York: McGraw-Hill.

Fullan, M. (1991). "Why Teachers Must become Change Agents." *Educational Leadership* 50, 6: 2-13.

Harris, A. Leithwood, K.,Day, C., Hopkins, D and Sammons, P.,. (2006). “Seven strong claims about successful school leadership”. National College of School Leadership, Nottingham.

Hopkins, D. (2001). School Improvement for Real, Falmer Press, London.

Institute of Social and Policy Sciences. (2019). Education Budget is Pakistan. Islamabad: Institute of Social and Policy Sciences in Pakistan.

Johnson, J. &. (2011). Political science and research methods. . 6th Edition. http://www.sagepub.com/ (Downloaded August, 2012).

Kington, A., Day, C., Smees, R. Stobart, G., Sammons, P., Gu, Q., and Mujtaba, T. (2006). “Variation in teachers’ work, lives and effectiveness”. Research Brief RB743, (VITEA), Department for Education and Skills, London.

Leithwood, K. (2003). “What we know about successful school leadership”, brief prepared for the Task Force on Developing Research in Educational Leadership, American EducationalResearch Association, Temple University, Division A, Pennsylvania, PA

Macutay, M. J. (2020). Teaching-Learning Environment for Effective Mathematics Classroom. *Journal Of Critical Review*s, 1-5.

Memon, M. (2000). The future of headteachers as educational leaders in Pakistan: Implications for pedagogic leadership. Education 2000, 3(3), 17–21.

McMillan, J. &. (2010). Research in education: Evidence based inquiry. . 7th Edition. New York: Pearson.

Naziev, A. (2017). What is an Education. Ryazan State University (pp. 1-6). Ryazan: Ryazan State University.

Pavleković, M. (2013). Mathematics Teaching for the Future. Osijek: Josip Juraj Strossmayer University of Osijek.

P.J., Ruiz-Quintanilla, House, R.J., Hanges, S.A., Den Hartog, D.N., & Dorfman, P.W. (1999). Culture specific and cross-culturally generalisable implicit leadership theories: Are attributes of charismatic/transformational leadership universally endorsed? Leadership Quarterly, 10(2), 219–256.

Ribbins, P., & Gronn, P. (2000). Researching principals: Context and culture in the study of leadership in schools. Asia Pacific Journal of Education, 20(2), 34–45.

Salfi, N. A. (2011). "Successful leadership practices of head teachers for school improvement: Some evidence from Pakistan.". Journal of Educational Administration 49(4): 414-432.

Shaw, J. (1998). Cultural variations in management practice: An exploration of the management trainer's dilemma. Public Administration and Development, 18(4), 319–342.

Simkins, T. (2003). School leadership in Pakistan: Exploring the headteacher's role. School of Education, Sheffield Hallam University, UK.

Southworth, G. (2002). Instructional leadership in schools: Reflections and empirical evidence. School Leadership and Management, 22(1), 73–91.

Stadler-Altmann, U. (2015). Learning Environment: The Influence of School and Classroom Space on Education. ResearchGate, 252-262.

Townsend, T. (2007). International Handbook of School Effectiveness and Improvement, Springer, Dordrecht.

Ubben, G.C. and Hughes, L.W. (1989). The Elementary Principal's Handbook, Allyn and Bacon, Boston, MA.

UNESCO. (2014). Challenges in Basic Mathematic Education. UNESCO.

UNESCO. (2018). Education and Literacy. Paris: UNESCO.