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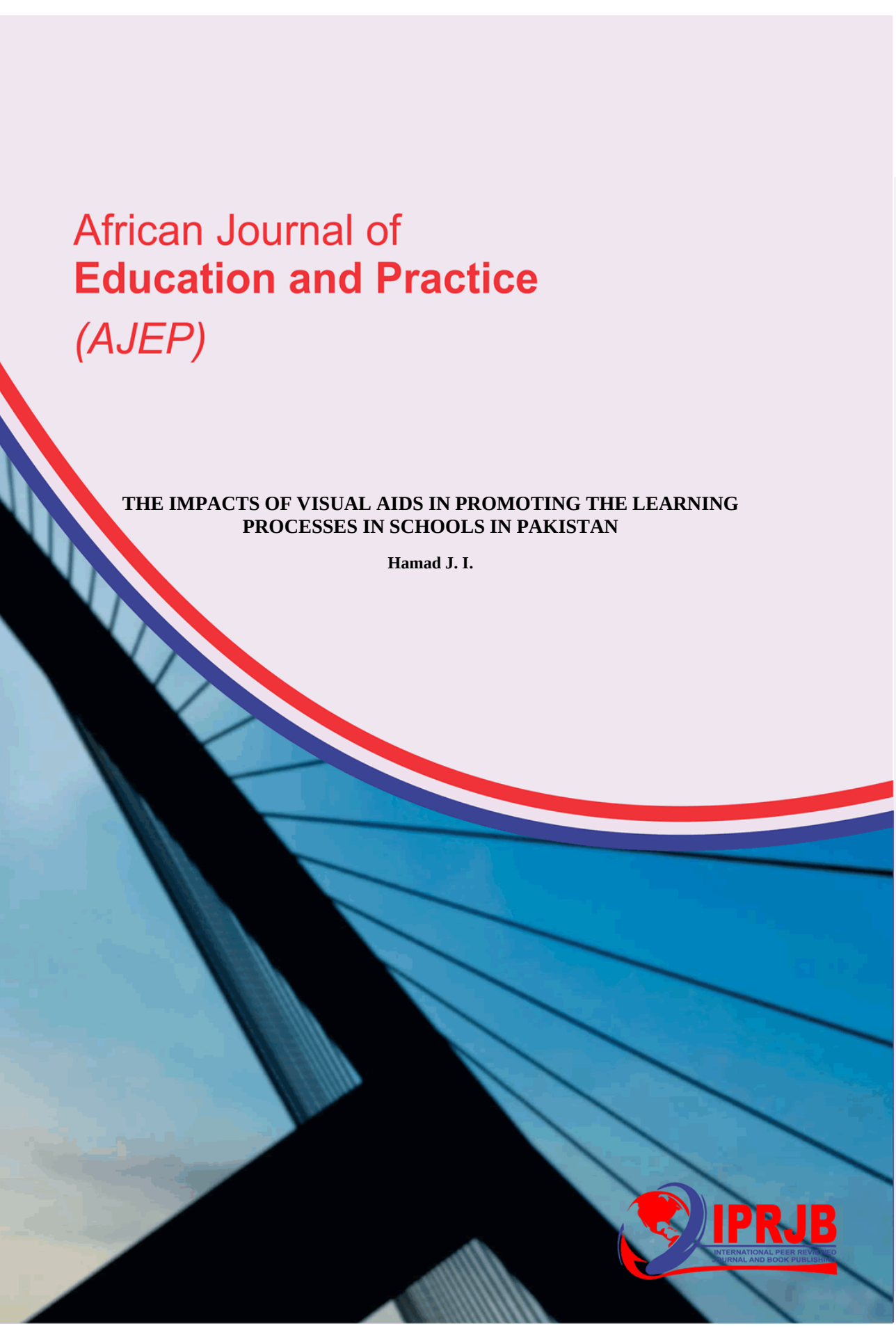

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The Impacts of Visual Aids in Promoting the Learning Processes in Schools in Pakistan

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Abstract

Purpose: The purpose of this study is to investigate the impacts of visual aids in promoting the learning processes in schools in Pakistan.

Methodology: The study adopted a desktop methodology. Desk research refers to secondary data or that which can be collected without fieldwork. Desk research is basically involved in collecting data from existing resources hence it is often considered a low cost technique as compared to field research, as the main cost is involved in executive's time, telephone charges and directories. Thus, the study relied on already published studies, reports and statistics. This secondary data was easily accessed through the online journals and library.

Findings: The findings of the study revealed the existence of a contextual and methodological gap relating to the impacts of visual aids in promoting the learning processes in schools. Preliminary empirical review found that using visual aids as a teaching aid stimulates thinking and improves the learning environment in the classroom. Effective use of visual aids substitutes monotonous learning environments. Students develop and increase personal understanding of the areas of learning when they experience a successful and pleasant learning in the classroom. Students find visual aids sessions useful and relevant when it has some direct relation to the course content.

Unique Contribution to Theory, Practice and Policy: The Cognitive Load Theory may be used to anchor future studies on the impacts of visual aids in promoting the learning processes in schools in Pakistan. Schools and their administration must share the opinions of the students regarding the use of visual aids that will be helpful in enhancing the learning process. Refresher courses, workshops and conferences may be arranged for the teachers for improving their skills of using audio visuals to the needs of the students. There is need for the Ministry of Education to mount periodic training sessions for teachers who are already in the field to be retrained on recent discovery regarding the use of teaching/learning resources.

Keywords: *Visual Aids, Learning Process, Teaching Materials.*

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INTRODUCTION

Everyone needs to have access to quality education. Education's core tenets are instructing and being instructed. The professors encourage student participation and employ a variety of methods to impart knowledge to their charges. As time has progressed, new approaches and strategies have been implemented in the realm of education. Teachers can better explain concepts to students and pique their attention with the help of visual aids. In the classroom, visual aids are instructional aids intended to enhance students' learning. When it comes to learning, "visual aids are those sensory objects or images which initiate or stimulate and assist learning," (Shabiralyani, Hasan, Hamad & Iqbal, 2015). Visual aids are any instruments that can be utilized to make the learning process more real, more accurate, and more dynamic (Nguyen, Nguyen & Nahavandi, 2019)

In order to better convey information or make a lesson more memorable, visual aids are often used (pictures, models, charts, maps, videos, slides and real objects). These days, you can find just about any kind of visual aid online (Ashaver & Igyuve, 2013). We can categorize these tools as follows: assistance that rely on sight are known as "visual aids." Some common types of visual aids include models, real-world objects, charts, photos, maps, flannel boards, flash cards, bulletin boards, chalkboards, slides, overhead projectors, and so on. A blackboard and some chalk are the most common of these. When a course is required of students but the textbooks are packed with exercises requiring a high level of interactive skill, teachers are faced with a more difficult task. In particular, combining textbooks with audiovisual aids as a supplemental resource for classroom course activities is now a typical occurrence.

In the classroom, visual aids play a crucial role. In schools, visual aids are tools that help make lessons more engaging and accessible to pupils. When it comes to imparting information, nothing beats the power of a good visual aid. Agwu & Ogochi (2019) research indicates the psychology of visual aids as follows: 1% of what is learnt is from the sense of taste, 1.5% from the sense of touch, 3.5% from the logic of smell, 11% from the logic of hearing, and 83% from the logic of sight. According to studies, the average person retains only 10% of what they read, 20% of what they hear, 30% of what they see, 50% of what they hear and see, 70% of what they say, and 90% of what they say while performing an action. As a result, there's no denying the power and fluidity of today's technological tools and information infrastructure.

The act of learning is intricate. It's a shift of perspective; a decision to alter one's conduct in a way that's expected to last for the foreseeable future. Newly acquired abilities, theories, perspectives, information, and facts can all contribute to the learning process (Borrego & Henderson, 2014). Several teaching/learning materials can be used to reinforce learning since they stimulate, motivate, and focus learners' attention for a short period of time during instruction. Teachers can better explain concepts to students and pique their attention with the help of visual aids. To facilitate the teaching and learning process in the classroom, visual aids are frequently employed. Specifically, audio visual aids are "any gadget which via sight and sound boost the individual s' practice, outside that acquired from read," as defined by Singh (Yonas & Senapathy, 2020). Visual aids are educational tools used in the classroom to improve student engagement, retention, and motivation. Instructional aids include things like models, charts, film strips, projectors, radios, televisions, and maps (Pechenkina, 2017). Visual aids are a powerful resource that "fill the past

with an air of actuality" by providing students with accurate information that holds their interest, clarifies complex concepts, and facilitates the appreciation of antiquity. They make auditory-visual demands on the brain. One of the factors that contributes to students' engagement in class is the use of visual aids; when students examine a visual model or aid, their actions are evaluated as a form of participation.

Furthermore, visual aids promote physical activity, which can help reinforce control. There is a well-known Chinese adage that goes something like, "one sighted is worth, a hundred words" (Roul, 2014). Since "if we hear we forget, if we see we remember, and if we do something we know it," the use of visual aids in the classroom is proven to improve retention and knowledge acquisition. Visual aids stimulated thinking and cognize, and their application in the classroom has several benefits (Kabooha, 2016). Speakers can offer more polished and consistent presentations with the help of visual aids. A profession in education presents boundless possibilities for enhancing students' academic lives. While certain ideas and educational goals may be easily held by kids, others will require you to think creatively to ensure that critical learning goals are fulfilled. One method to improve lessons and provide students more opportunities to comprehend material is through the use of visual aids in the classroom (Shyamlee & Phil, 2012).

The purpose of visual aids is to facilitate learning by presenting informational units through either auditory or visual stimuli. They make the abstract tangible, facilitating actual, active, and vital learning in the context of the practice activity. They aid in the classroom instructor's preparation and textbook study. Great educationist Comenius said it best: expressing things clearly to the senses and perceptible objects so that they can be appreciated readily is the basis of all learning (Friesen, 2017). Visual aids, auditory aids, real-world items, and many others all fall under the umbrella term "learning resources" (Khany & Kamalvand, 2022). Specifically identified visual aids can be either home-crafted or mass-produced. Wall charts, illustrative images, symbolic materials, and other flat objects are all examples. Audio-visual assistance are also available. These are devices used for education, such as televisions, radios, and projectors of various types that incorporate audio components. Like books, movies can be used in a variety of classroom settings.

There are benefits to using teaching/learning tools beyond just improving pupils' memorization. In the right hands, they can motivate kids to work hard and boost their grades. The combination of visual and auditory stimulation is especially powerful because it appeals to the two most essential senses at once (Wiedmann *et al*., 2013). Instructors should remember that they are similar to salespeople in that they are trying to persuade students to buy into a particular philosophy. It goes without saying that one of the primary aims of any form of education is for pupils to retain as much information as possible, especially the essentials. The effectiveness of educational materials in this regard has been the subject of numerous research. Due to their ability to present an accurate visual representation and facilitate learning, high-quality educational resources can be an effective tool for overcoming linguistic barriers (Gerchow et al., 2021).

Learning materials can also be used to illustrate the connection between real-world examples and abstract ideas. Location, time, size, value, and frequency relationships can also be displayed through the use of symbols, graphs, and diagrams. Abstract connections can be visualized with the use of symbols representing the intertwined variables. If students cannot see or hear the

instructional aids, they are useless. Speech and sound recordings should be checked for loudness and quality in their final setting (Lange & Costley, 2020). All students should be able to see the class's visual aids. The calligraphy and illustrations should be large enough for even the farthest students from the aids to see them clearly, and any colors used should be highly apparent and give clear contrast. Sequencing events so that new information builds on old information has been shown to increase the effectiveness of aids. Good logic and established norms usually dictate the order of events. A teacher might take the first step toward incorporating technology into the classroom by planning lessons that make purposeful and relevant use of technology. Instead than being the focus of education, technology should serve to supplement it.

Use of technology in the classroom can foster student collaboration. According to Ganapathy *et al*., 2017), incorporating technology into the classroom curriculum entails using it to teach content and foster higher-order thinking among students. Innovation in education was made possible by technological advancements. It is surprising how far we have come in terms of creating useful visual aids for use in the classroom. The educational climate in Pakistan has improved as a result of technological advancements. The Ministry of Higher Education in Pakistan initiated reforms to improve the quality of education in the country. University classrooms were outfitted with state-of-the-art technology teaching aids to engage and empower students. However, it is recommended that the same materials be used, such as those found in a course outline. Slide overlays, chart donning techniques, chalk, and marker boards are all simple tools that can help you organize your presentation's flow better. Different colors can be used to accentuate and organize a sequence.

Statement of the Problem

It is common knowledge that visual aids are an invaluable part of the educational process, helping students learn and teachers convey concepts clearly and calmly. Humans may benefit from visual aids since they make learning easier and faster. Students make an effort to identify it, or recognize its functions and strive to get its interpretation, during instruction using models and visual aids (Bujak *et al*., 2013) They make adjustments based on their prior knowledge and experience, and they actively seek to learn more about the novel experience. It is good to excite the pupils or keep them busy in order to elicit their participation in the educational process. Nonetheless, the vast majority of educators fail to make effective use of visual aids in the classroom. Because of this, learning results may suffer and classroom efficiency may suffer.

Studies by Al- Aqad (2021); Ngonyani (2018); Namaziandost (2019); Jameel (2016); Yunus (2013); Dalali (2017); Chundung (2020) and Wazeema (2017) presented a contextual gap where desired research findings provided a different perspective on the topic of discussion. Therefore, this study seeks to investigate the impacts of visual aids in promoting the learning processes in schools in Pakistan.

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LITERATURE REVIEW

Theoretical Review

The Cognitive Load Theory

The Cognitive Load Theory was invented in 1988 by John Sweller. This theoretical framework explains how information is processed in the human mind as well as how the amount of cognitive

load influences learning (Paas & Sweller, 2012). The working memory is said to have a limited capacity for the processing of information in accordance with the Cognitive Load Theory. The amount of mental effort that is necessary to process information is referred to as the cognitive load. Learning is hindered when the amount of mental work to be done is greater than the capacity of the working memory.

It has been shown that the use of visual aids can significantly reduce mental strain and improve educational outcomes. For instance, organizing complicated material through the use of diagrams, graphs, and charts can be helpful in making the information easier to learn and recall. In addition, visual aids can help to highlight crucial points and relationships between ideas, minimizing the amount of time that students need to spend looking for this material in their working memories. The idea that learning is at its most efficient when the amount of mental work being done by the learner is kept to a minimum is one of the fundamental tenets of the Cognitive Load Theory (Leppink & Heuvel, 2015). The presentation of information in a manner that may be comprehended and processed by the brain with less effort is made possible through the utilization of visual aids, which can contribute to the reduction of cognitive load. For instance, a picture or a diagram can more effectively convey information than a lengthy prose description, which may require learners to maintain numerous bits of knowledge in their working memory at the same time.

According to the Cognitive Load Theory, there are three different kinds of cognitive load: internal, external, and relevant. The term "intrinsic load" refers to the complexity that is built into the curriculum itself. The term "extraneous load" refers to the mental strain that is caused by the learning materials themselves, such as information that is not pertinent or directions that are unclear. The term "gemane load" refers to the mental effort necessary to comprehend newly acquired information and incorporate it into previously acquired knowledge systems (Kirschner *et al*., 2018)By displaying information in a style that is easy to understand and well-organized, visual aids can help to lessen the amount of unnecessary load that is placed on the working memory. This frees up more resources for the load that is actually relevant. In a nutshell, the Cognitive Load Theory proposes that the utilization of visual aids can assist in the reduction of cognitive load, the improvement of learning, as well as the improvement of information retention and transfer.

Empirical Review

Al- Aqad (2021) conducted a study on the impact of audio- visual aids in learning English among MSU third year students. The goal of this study is to find out how well third-year MSU students can learn English vocabulary with the help of audiovisual tools. The foundations of higher education are at risk when multimedia is used to teach and learn. This study looks at how Malaysia's Management and Science University's third-year English students use multimedia in their classes (MSU). Researchers used both a qualitative and a quantitative method to meet the goals of the study. The study corpus was put together by taking an online poll of 200 students in the Bachelor of English as a Second Language program (BTESL). The results of the study show that multimedia helps BTESL students learn English in creative and interesting ways. It also got their attention and made them want to learn new words. The study says that third-year English

students can learn a lot from multimedia. It also helps students get a better grasp of correct language and terminology.

Ngonyani (2018) conducted a study on the impact of visual aids on students' academic performance: a case of Mkuranga district secondary schools. The study looked at the different visual aids that teachers in secondary schools in the Mkuranga district use and how well they help students learn. It also looked at the problems that teachers face when making and using visual aids. Because of how it works and how it fits with this study, a qualitative approach was used. A group of 90 people, including students, teachers, and heads of schools, was chosen as a sample. Interviews, focus group discussions, observing, and reading documents were all ways that data was gathered. Thematic analysis was used to look at the data. The study's results showed that students' academic performance is affected by how well they use visual aids. The results of the studies showed that many students in the schools that were looked at did poorly in school, as shown by their low scores on the Form Four National Examinations, because their teachers mostly used chalkboards as their main visual aid. They didn't add any other visual aids to help students understand and remember what they were taught. This was because schools didn't have enough visual aids and didn't have enough money to buy or fix the ones they did have. Most teachers didn't have enough skills and experience, which made things worse. Aside from their training before they started teaching, the teachers in the schools we visited had not been given any other training on how to make and use visual aids.

Namaziandost (2019) studied the impact of using audio- visual aids on teaching listening among Iranian pre- intermediate EFL learners. The purpose of this research was to examine how using visual and auditory cues in the classroom affected the listening skills of Iranian EFL beginners and intermediates. The researcher chose 40 similarly situated pre-intermediate pupils and randomly assigned them to one of two groups. Each group consisted of twenty people: an experimental group and a control group. To gauge where students were at in terms of listening comprehension going into the course, a pre-test was given. The researcher gave a post-test to determine the efficacy of using audio-visual aids in the classroom after the 15-session therapy. Independent and Paired Samples T-tests were performed on the given data. The results showed that the EG students taught with real-world video recordings outperformed the CG students taught with audio CDs in terms of listening comprehension (CD). The study's findings imply that EFL students can benefit from employing audio-visual aids to improve their listening comprehension.

Jameel (2016) researched on the impact of Audio Visual Aids (AVA) and Computerize Materials (CM) on university ESP students' progress in English language. Twenty-four freshmen from the University of Anbar's Petrochemical Engineering Department, College of Engineering, volunteered to take part in the study. A control group and an experimental group were created. Fifteen students participated in the study's experimental group, while nine served as controls. Audio-Visual Aids (AVA), ESP computerized materials, and a post-study achievement test were the research tools. The first semester of 2014–2015 was used to gather study data by administering an achievement test. The results of the study showed that the academic performance of students in the experimental group improved when they were exposed to Audio-Visual Aids (AVA) and computerized materials.

Yunus (2013) conducted a study on the use of visual aids as a motivation tool in enhancing students' interest in reading literary texts. The purpose of this research is to learn how educators feel about showing students visuals (such as animation videos, photographs, films, and projectors) as a way to pique their interest in reading literary texts. The goal of the study could only be attained through the employment of a mixed-method approach to data collection. As a result, 52 English instructors from seven public high schools in Kapit, Sarawak, Malaysia, were chosen. Random selection was used to pick five of the responders for the interview. According to the results, most educators see the use of visual aids favorably. Teachers are able to help pupils of varying levels of English competence read literary texts with enthusiasm by including visual aids into their lessons. This is crucial because reading good literature encourages pupils to think critically and creatively. The study found that while teachers were generally supportive of using visual aids, it may be enhanced by including student perspectives.

Dalali (2017) investigated the effect of visual aids on enhancing teaching and learning process in public secondary schools in Ilemela Municipality, Tanzania. Skinner's Instructional Theory served as the theoretical framework for this investigation (1974). The convergent parallel research design was utilized as part of a mixed methods study. In order to get the answers they needed, researchers recruited 111 people from the school community, including students, instructors, academic masters, principals, and quality assurance officers. Questionnaires and an interview guide were used to compile the data. SPSS version 20 was used for the analysis of the quantitative data, while thematic analysis was used for the qualitative data. The results indicated that educators frequently overlooked the benefits of using visual aids in the classroom. The findings of this study support the use of visual aids in the classroom as an effective method of facilitating both learning and instruction.

Chundung (2020) also conducted a study on the teachers' use of visual aids in enhancing teaching and learning process in public primary schools in Barkin- Ladi, Plateau State, Nigeria. The researchers used survey data alongside phenomenological analysis to draw their conclusions. Teachers, students, principals, department heads, and supervisors from public elementary schools participated in the study. The study employed a non-probability purposive sampling strategy in addition to a stratified random sample methodology. All disciplines benefited from the use of various visual aids such as real-world items, diagrams, charts, flashcards, maps, and drawings, as evidenced by the findings. Specifically, the study suggests that the government should help teachers in public primary schools by providing enough visual aids to use during the teaching and learning process, and that the education office should ensure that close supervision and monitoring of teachers is done promptly to ensure that they are meeting the needs of their students.

Wazeema (2017) conducted a study on the implications of multimedia audio- visual aids in the English language classroom. The purpose of this research was to demonstrate the usefulness of incorporating audiovisual materials into English language classes at South Eastern University of Sri Lanka. The study uses a purposeful sample strategy with 80 total participants. Interviews and in-person observations served as the primary sources of information. Records, journals, papers, annual reports, and websites were consulted for secondary data. Quantitative and qualitative data analysis techniques were used to compile a descriptive summary of the information gathered. The results demonstrated that facilitators continue to employ the same, time-tested instructional

strategies. All but one student agreed that integrating multimedia audio-visual aids is an effective way to motivate students, get them involved in language classes, keep their interest in studying high, and boost their enrollment and performance in English classes. Inadequate use of multimedia audio-visual aids has been attributed to a lack of technical resources as well as a lack of training, expertise, and experience among teachers, all of which contribute to a subpar environment for English language learners.

METHODOLOGY

The study adopted a desktop methodology. Desk research refers to secondary data or that which can be collected without fieldwork. Desk research is basically involved in collecting data from existing resources hence it is often considered a low cost technique as compared to field research, as the main cost is involved in executive's time, telephone charges and directories. Thus, the study relied on already published studies, reports and statistics. This secondary data was easily accessed through the online journals and library.

FINDINGS

Our study came down to two knowledge gaps, that is the contextual gap and the methodological gaps. A contextual gap presents itself when desired research findings provide a different perspective on the topic of discussion. For instance, Wazeema (2017) conducted a study on the implications of multimedia audio- visual aids in the English language classroom. Purposive sample method is used for this study and the sample size is 80 students. Primary data was collected using interviews and observations. Secondary data were gained through records, journals, articles, annual reports and websites. The findings showed that still the facilitators practice same traditional method of teaching. Nearly all students pointed out that using multimedia audio-visual aids is a motivation tool and makes students active in the language learning classrooms, maintains a high level of interest in language learning and highly encourages students' participation and enrolment and it is helpful for better English language learning. Lack of technical facilities, absence of proper training, knowledge and experience among instructors are identified barriers behind the inadequate use of multimedia audio-visual aids in the English language learning classrooms. On the other hand, our current study focuses in the impacts of visual aids in promoting the learning processes in schools in Pakistan.

Secondly, this study also presented a methodological gap, that is, for instance, Wazeema (2017) in his study on the implications of multimedia audio visuals in the English language classroom- adopted a purposive sample method using a sample of size of 80 students. Primary data was collected using interviews and observations. Secondary data were gained through records, journals, articles, annual reports and websites; while our current study adopted desk study literature review methodology.

CONCLUSION AND RECOMMENDATIONS

According to the findings of the research, one can draw the conclusion that employing visual aids in the classroom as a kind of pedagogical support helps to improve the atmosphere of learning there. Learning settings that are too monotonous can be replaced with effective use of visual aids. When students have positive and enjoyable learning experiences in the classroom, their own grasp

of the subject matter they are studying grows, and they become more knowledgeable overall. Students find sessions with visual aids effective and relevant when there is some direct connection between the topic being covered and the session. The current study shed light on the attitudes and viewpoints held by students towards the application of various visual aids and resources. Nonetheless, it is of the utmost importance to reorient the thoughts, perceptions, experiences, and both failures and successes of educators when utilizing visual aids as a resource.

The views of the pupils should be taken into consideration by the administration of educational institutions and schools when deciding how best to make use of visual aids in order to improve the learning process. To help teachers improve their ability to adapt their use of audio-visual materials to the requirements of their pupils, it may be possible to provide professional development opportunities such as refresher courses, workshops, and conferences. It is essential for the Ministry of Education to provide regular training sessions for instructors who are already working in the field so that they can be retrained on the most recent findings about the application of various instructional and scholastic resources. The Ministry of Education should make an appeal to non-governmental organizations, private sectors, individuals, and industries to assist in the process of supplementing and substituting obsolete educational materials and teaching / learning aids such as audio and visual materials and software packages. It is essential for instructors working in the field to have access to a forum where they can get together on a regular basis to discuss and evaluate the efficacy of their lessons, taking into account the ways in which instructional and educational technology can be applied to the structuring of curricula used in Pakistani secondary schools, postsecondary institutions, and higher education institutions.

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