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Impact of Multimedia on the Academic Performance of the Students at Secondary School Level

Abstract   Multimedia equipment is part of ICT facilities. The study aims to find out the impact of multimedia on the academic performance of the students at secondary level of Peshawar District. The main objectives of the study were (i) to find out Impact of multimedia on the academic performance of the students at secondary level. (ii) to assess the application of multimedia during the class and their impact on the student academic performance. The research was descriptive in nature. All the Secondary School of Peshawar district were population. The research sample included 20 public schools from the Peshawar District, 20 heads, 40 teachers and 40 secondary school students in the Peshawar District. The questionnaire was used as a research instrument. It was concluded that, given the lack of multimedia at school, it is recommended that the government provide multimedia services to the school.

Key Words: Multimedia, Technology, Aademic Performance,

Introduction

Multimedia is a strong technique of education and study within the framework of social work. The five popular technologies contributing to the education process are the narrative media, interactive media, communication media, adaptive media and productive media.

There is a multiple interpretation of the idea of multimedia. All meanings agree that multimedia includes in an integrated way documents, images, animations, video and sound. Multimedia thus represents a consolidation of all the technological elements by combining, beside interactive environments, sound, images, video, drawings and texts with high quality. Reactive, proactive and reciprocal interactions exist in multimedia technology (Schulmeister, 1997; Inceday, 2018). Multimedia is effective in education because of the interactivity, versatility and integration characteristics of multiple media that can promote learning, take into account differences between learners and increase motivation (Aloraini, 2005).

Chalk and its way of teaching, which entails too much speaking, lost their productivity and interest in the teaching of students. It was claimed from online free education that change in education had a significant effect on the field of education. Learning and teaching have been found affected by a variety of new technologies, such as student interactions and scheduled training, which allow space for exploitation that cannot be used in other mediums. Students will be able to learn new knowledge through multimedia facility and education (Albirini, 2006).

Education technology is a research and ethical activity for the production, use and management of technical processes and tools suitable for learning facilitation and performance enhancement (Osu, Udosen and Akpan 2010) It is described as a number of instruments that could be useful for student-centered learning most simply and contentedly. The teachers are called to be 'Side Guides' instead of 'Sage on stage' (Ololube, 2007).

Education technology is also known as 'learning technology'; throughout the teaching and learning cycle, it primarily includes use of technology. In this area, item technology not only requires the use of latest technologies and techniques such as tablets, interactive whiteboards and smartphones; internet, Wi-Fi, YouTube and other technologies also provide powerful and improved

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control of learning processes, delivery system of information, effective teaching and memory control (Fari SA, 2010).

Multimedia provides ease and educational facilities. With multimedia practices, new information can be learned by students. Dwyer notes that students can acquire skills and information that cannot be accessed historically, and that they have also the opportunity, by way of multimedia technique, to prepare their own products (Dwyer, 1993). The purpose of multimedia is to help students with different skills and styles of learning could therefore be confirmed. He also emphasizes that multimedia offers every student individual opportunity to work. It encourages a student to focus on the subject(s) that he or she wants (Dwyer, 1993)

The use of multimedia has two implications for student education: The enormous and simple access in education to textual and audio content can make the lessons more extensive and attractive, which can help to enhance the teachers' ability to self-produce the content offered by the information technology and communication technology. In the assessment of the British, The Government Teacher Laptops (2004-2007), with a laptop survey, extended their tools access capabilities and saved time to plan and prepare lessons (Cunningham, 2006)

Multiple media uses can have a positive effect on education when properly designed compared to traditional academic achievements instruction (Akkoyunlu, 2005). Taking the facts collected from literature into account, we can conclude that Multimedia activates the learner not only easily learn with expectations, but also contributes its own quota and makes it more important to learn mathematics.

Teachers required mainly tools to help students better understand the subject they are studying. Enabling teachers to access digital learning tools that lead to the creation of a meaningful idea, enabling the teacher to concentrate more on teaching and encouraging students individually to understand this subject. Multimedia development also helps to make learning easier by allowing students to learn not only at school, but also in the home. This will help to develop the learning skills of students. It provides an immersive teaching and learning experience with the help of multimedia elements, including text, graphics, video, sound and animation.

In addition, multimedia can be observed in learning and training as authentic and varied. Semerci (1999) points out that the message is conveyed by multimedia and thus provides recipients with a rich learning environment. The subjects taught should be transmitted so that other methods like web-based audio, video and animation cannot authentically be taught in classrooms. It will ensure a close connection with truth and total learning (Semerci, 1999). Multimedia also helps to inform visually and not visually written content on data use, access, exchange and transport

Multimedia also provides a familiar, complex, economic and realistic educational atmosphere (Yükül, 2014). The rise in the academic success of students is also a technological aid to education. The multimedia program improves the academic performance of students as opposed to conventional teaching. The use of multimedia positively affects education when it is well planned in terms of academic success in contrast with conventional learning (Akkoyunlu and Yılmaz, 2005). Multimedia is made up of digital platforms where audio, visual and animation media are delivered to written media, high definition media and graphs are set (Maddux et al., 2001).

Multimedia is also associated with a traditional approach to education (Rolfe & Gray, 2011). It is provided with meaningful words, sounds and pictures of learning (Mayer, 2005a; 2005b; 2005c). In science teaching the primary value of interactive factors is (Altherr, Wagner, Eckert, & Jodl, 2004). Various phenomena and processes can be vividly represented, complex material replicated and abstracted at various levels with the help of multimedia. It helps to be truthful and meaningful. Multimedia is particularly useful for students whose motivation is poor and with low prior qualifications (Singh, 2003).

"The integration of text, images, sound, animation and video, and some or all of them into a coherent program is a multimedia feature" (Philips, 1997). (Philips). Bagui (1998) and Daniels (1995) note that data communication can be conveyed on a number of channels, as described in Junaidu (2008). If more than one channel provides information, learning will improve.

Multimedia is a digital media system that stimulates several senses at times. Teachers can control the material and flow of information using the interactive design. Multimedia use in Pakistan is very limited for several reasons in classroom teaching. Those include high expenditures for software,

equipment and other related services and shortage of teachers and qualified workers on a computer basis. Another issue is the role of teachers when it comes to their use.

For discussion, multimedia can be used. Tendencies in updating and developing instructional strategies are associated with the growth of interactive teaching methods, the growth of active creative teaching and the integration, according to their complémentarity, of an efficient and contextual mix of the methods formal and informal, conventional and new strategies. Students will endorse the use of multimedia by highly qualified teachers.

Statement of the Problem

The present study was focus on finding out the impact of multimedia on the academic performance of the students at secondary school level of Peshawar District.

Research Objectives

The main objectives of the study were:

1. To find out Impact of multimedia on the academic performance of the students at secondary level.
2. To assess the application of multimedia during the class and their impact on the student academic performance.

Research Questions

The research questions of the study were:

1. How does the multimedia impact secondary school students ' academic performance?
2. When the application of multimedia and their impact on academic performance of students are assessed during the course.

Significance of the Study

The study will contribute to improving the teachers' potential to use computer courses for multi-day use. The study will charm the Government by applying various methods to boost the recital of the students. This type of study helps differentiate the various factors, making it likely that programs are being used. According to the following questions, the significance of topic analysis is:

Delimitation of the Study

The study was delimited to all the secondary school of district Peshawar

Research Methodology

Research Design

Description and survey form were the nature of the analysis.

Population of The Study

The entire secondary schools of Peshawar District were selected as a sample population.

Sample of The Study

The sample of the study comprised of 20 government schools of district Peshawar. Furthermore, the sample included 20 heads, 40 teachers and 40 students of secondary schools of District Peshawar.

Sample Technique

Simple random sampling technique is used in this research because it guarantees that the sample chosen is illustrative of the population.

Research Instrument

The questionnaire was used as a research instrument. Survey is used as a research instrument. The main objective of the analysis is to find out the impact of multimedia on the students' academic performance at the Peshawar District at the secondary level. For validity purpose, the questionnaires were filled by 2 heads and 5 teachers and 5 students for improvement, refinement and for the purpose of acquiring accurate and correct data collection.

Data Collection

To collect data, personally visit to different schools and have collect the data from heads, teachers and students, so that careful data should be collected.

Data Analysis

Data obtained through questionnaire is presented, interpreted and analyzed in the light of the study objectives in the application of frequency and percentages. In this way, statistical analysis percentages were applied for generalizing the significance of responses.

Result and Discussion

Research demands involve a thorough analysis of the problems to find a workable solution. The main aim of the study is to know the impact of multimedia on the academic achievements of secondary school students in the district of Peshawar. The survey was conducted to get the respondents' opinions on this. The nature survey of research as well as descriptive analysis. The methods of proportion are simple and viable to use for studying performance; boldness and features are given in the counters as follows.

Section A:

Analysis of Demographic Variable:

Table 1. Respondent of Heads Academic Qualification.

	Respondents of Heads (n) = 20	
	N	%
B.A / B. Sc	04	20
M.A / M. Sc	12	60
M. Phil	04	20

The table above reveals that B.A / B.Sc has 20 % heads. The M.A / M.Sc. is 60% In their educational preconditions, the criteria and 15% have M. Phil.

Table 2. Respondent of Teacher Academic Qualification:

	Respondents of Teachers (n) = 40	
	N	%
B.A / B. Science	24	60
M.A / M. Science	10	25
M. Phil	06	15

The table above indicates that 60% of teachers are B.A / B.Sc. M.A / M.Sc. has 25 percent. In their education criteria, M. Phil has 15 percent.

Table 3. Numbers of Information Technology Teachers

	Respondents of Teachers (n) =40	
	Number(N)	(%)
B.CS	12	30
M.CS	CS	20

Table indicates that the 65 % of IT teacher   have B.CS degree and 35 % have M.CS degrees.

Table 4. Finding Monthly Income for Students Whose Children are Surveyed

	Respondents of Students (n) =40	
	Number(N)	Percentage (%)
Rs. 8000 – 9000	30	75
Rs. 9000 -10000	22	55
Rupees. 10000 to 12000	18	45
Rs. 12000 – 15000	06	15
Rs. 18000 – 24000	04	10

The table above shows that 75 percent of persons once-a-month pay is up to 8000, 55 % of people revenue is up to 9000, 45 % out of a hundred have up to12000, 15 % out of a hundred have up to 15000 and 10 percent people monthly returns is overhead 24000. The countersign post that common of persons are deprived.

Table 5. Parent Professional

	Respondents of Students (n)= 40	
	Number(n)	(%)
Overseas	20	50
Agriculture	10	25
Militaries	06	15
Government Servants	04	10

The table above shows that 50% of students are Abroad, 25% are3 farmers, 15% are in forces , 10% are administration retainers.

Table 6. Level of Education of Student

	Respondents (n)= 40	
	No (N)	Percentage (%)
Illiterate	10	25
Middle level	08	20
Secondary level	07	17
Intermediate level	06	15
Bachelor level	05	13
Master level	04	10

The above table shows that 25 % students are ignorant having no education 20 % students have middle education level, 17 % students have Secondary level, 15 % have intermediate level of education, 13% have Bachelors level and only 10 % have Masters level

Section B:
Analysis of Questionnaires:

Table 7. Use of Multimediaon in the School Enhance the the Academic Institution Performance

Number of Respondent (N) Head/Teacher/Students					
		Yes		No	
		Number	Percentage	Number	Percentage
Heads	20	14	70	06	30
Teacher	40	24	60	16	40
Students	40	22	55	18	45

The tabulation showed that heads, teacher and students respective 70%, 60% and 55% were in favour of the use of multimedia in thee school improve the school performance while 30%, 40% and 45% disagreed.

Table 8. Multimedia Availability.

Number of Respondent (N) Head/Teacher/Students					
		Yes		No	
		Number	Percentage	Number	Percentage
Heads	20	06	30	14	70
Teacher	40	12	30	28	70
Students	40	10	25	30	75

The above table indicates that heads, teacher and students respective 70%, 70% and 75% were respondent that multimedia facility is not provided to students while the while 30%, 30% and 45% were disagree with statement.

Table 9. Multimedia Beneficial or Not.

Number of Respondent (N) Head/Teacher/Students = 100					
		1=Yes		0=N0	
		N	%	N	%
Heads	20	18	90	2	10
Teachers	40	36	90	4	10
Students	40	34	85	6	15

The above table indicates that that heads, teacher and students respective 90%, 90% and 85% were respondent that multimedia is beneficial to students while the while 10%, 10% and 15% were not agreed with statement.

Table 10. Multimedia Classroom Make Me Feel More Comfortable Learning

Number of Respondent (N) Head/Teacher/Students = 100					
		Yes		No	
		Number	Percentage	Number	Percentage
Heads	20	18	90	2	10
Teacher	40	37	93	3	7
Students	40	35	87	6	13

The above table represent that heads, teacher and students respective 90%, 93% and 87% were respondent that Mmultimedia classroom make me feel more comfortable learning environment. while the while 10%, 7% and 13% did not agreed with statement.

Table 11. Having a Class in a Multimedia Classroom is Enjoyable.

Number of Respondent (N) Head/Teacher/Students =					
		Yes		No	
		Number	Percentage	Number	Percentage
Heads	20	18	90	2	10
Teacher	40	36	90	4	10
Students	40	34	85	6	15

The above table reveals that heads, teacher and students respective 90%, 90% and 85% responded that having a class in a multimedia classroom is enjoyable to students while 10%, 10% and 15% disagreed with statement.

Table 12. Shows Whether Teachers take Interest in Children's Modern Education.

Number of Respondent (N) Head/Teacher/Students =					
		Yes		No	
		Number	Percentage	Number	Percentage
Heads	20	16	80	4	20
Teacher	40	34	85	6	15
Students	40	35	87	6	13

The above table shows that heads, teacher and students respective 80%, 85% and 87% were respondent that whether teachers take interest in children's modern education while 20%, 15% and 13% disagreed with statement.

Table 13. Shows Whether Teachers and Students Think That Modern Education Using Multimedia Is Good for Students Future

Number of Respondent (N) Head/Teacher/Students = 100					
		Yes		No	
		Number	Percentage	Number	Percentage
Heads	20	18	90	2	10
Teacher	40	37	93	3	7
Students	40	35	87	6	13

The above table shows that heads, teacher and students respective 90%, 93% and 87% responded in favour of using multimedia while 10%, 7% and 13% were not in favour with this statement.

Table 14. Indicating Whether Effects of Multimedia on Student Academic Performance is Good or Bad.

Number of Respondent (N) Head/Teacher/Students = 100					
		Yes		No	
		Number	Percentage	Number	Percentage
Heads	20	16	80	4	20
Teacher	40	34	85	6	15
Students	40	32	80	8	20

The above table that that heads, teacher and students respective 80%, 85% and 80% were respondent that whether effects of multimedia on student academic performance is good or bad. while the while 20%, 15% and 20% were not in favour with this statement.

Findings, Discussions, Conclusions, Summery and Recommendations

The few findings that are obtained by the research and the data that is collected through the aerial survey is as under;

Findings

After a proper survey and multiple factors, it is noted that the following main reasons were find out.

Demographic Findings
1. Most of the Heads possessed academic qualification of M. A / M.Sc 60% while 15% have M. Phil.
2. Most of the teachers had the academic qualification of B. A / B.Sc (60%) while 20% had M.A/M.Sc degrees.
3. It is found that there was a smaller number of information technology teachers regarding BCS and MCS.

4. Majority of the families had low monthly income and it is difficult for them to bear their children's school expenses.

Findings of the Questionnaire

1. It was found that majority of heads, teachers and students favoured the use of multimedia in their schools to improve the school performance.
2. It was found that majority of heads, teacher and students shared that multimedia facility is not provided to students
3. Majority respondents were agreed that that multimedia is beneficial to students for their knowledge, skills and ability.
4. The majority of heads, teachers and students, 90%, 93% and 87% respectively, responded that multimedia classrooms made me feel more comfortable learning. While 10%, 7% and 13% were not in agreement with the statement.
5. Mostly heads, teachers, and students i.e. 90%, 90% and 85% respectively, replied that it would be good if students had a class in a multimedia course, while 10%, 10% and 15% disagreed with the assertion.
6. It was also found that government do not take interest in providing multimedia to schools.
7. It was also found that there is a dearth of IT teachers at government secondary schools.

Discussions

The study suggested the following according to the results which showed that multimedia was successful compared to conventional teaching methods: Multimedia's rapid development provides unprecedented incentives for students to participate. In the learning process, multimedia tools should be used carefully. For debate, multimedia can be used. Trends to upgrade the teaching approaches and expand them are subscribed to the enhancement of the multi-media teaching approach, the development of active and innovative teaching, the combination of formal and informal approaches in a multitude of educational strategies, modern and new approaches focused on complementarity, benefits and mutual benefit requirements. Students should be assisted by highly qualified teachers in the use of multimedia. They need to direct and build relevant and successful learning approaches for students during the education process. The use of educational multimedia, like the use of textbooks, fosters educational teaching techniques, where the role of teachers is not just a provider of knowledge but a guide.

Conclusion

The following conclusions have been drawn after examining the whole process. It is concluded that the main reason of not using multimedia is lack of resources.

1. The majority of the heads who had a master's degree, while the number of teachers had academic qualifications at the undergraduate level.
2. The results of the study found that there was a smaller number of BCS and MCS IT teachers.
3. The result of the study found that their monthly income was low, and it was difficult for them to bear their school costs.
4. Most of the heads, teachers and students have been found to be in support of enhancing school performance using multimedia in the classroom.
5. Most of the heads, teachers and students were affected by a shortage of multimedia facilities.
6. Most of the respondents accepted that students benefit from multimedia due to their knowledge, abilities and skills.
7. Most of the heads, teachers and students used to make me more confident learning with digital lessons. But they did not comply with the declaration.
8. Mostly the heads, teachers, and students were told that it would be good if the students had a multimedia class.
9. It was also found that the government is not interested in providing multimedia to schools.

10. It has also been found that IT teachers in government secondary schools are much less available.

Recommendations

Following are the key recommendations.

1. It was concluded that the academic qualification of undergraduate teachers. As a result, there are less trained secondary school teachers. It is therefore recommended that high-quality teachers be recruited by the Government.
2. The study was concluded that that there was a smaller number of BCS and MCS IT teachers. It is therefore recommended that high-quality IT teachers be recruited by the government.
3. The findings of the study concluded that there was a smaller number of BCS and MCS IT teachers. It is therefore recommended that high-quality IT staff and teachers to be recruited by the Government.
4. The study result concluded that their low income of family of their students. Therefore, it is recommended that increase the level of income by Government increasing GDP growth   and teachers to be recruited by the government.
5. It was concluded that the shortage of multimedia and their equipment at Public secondary school. Therefore, it is recommended that the government should be provided the multimedia and new modern educational technology at secondary school.

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