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The Impact of a Computer Graphics Program for Acquisition of Some Practical Media Skills for Mass Communicators in Media Schools

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ABSTRACT This study discovered the impact of a computerized graphic program on the acquisition of practical media skills for mass communicators in schools of Ar'ar city in Northern Borders Region of Saudi Arabia. For this purpose, the study adapted experimental approach for the design of a special scale of skills required by media communicators in the media school. The skills included using the internet, school journalism and publishing, educational theater and media image and photography skills. The computerized program that depends on graphics technologies was designed for an interactive sample of communicators in the intermediate and high schools. The results showed the effectiveness of the graphic program designed for the development and acquisition of some of the media skills for mass communicators at schools. The usage of graphic techniques in the teaching of courses and supporting different educational stages is recommended.

INTRODUCTION

Communications and media technology have appeared to be a mainstay of the modern society's process of dissemination of information. To be said that media technology and computerized graphic programs have revolutionized the news and the media industry and improving the education system will be stated obviously according to Aduwa-Ogiegbaen and Iyamun (2005). The importance of technology for the educators and communicators in the administration of schools and the education system has never been greater. Practical media skills have become a requirement for those in charge of educational media in the schools (Robert 2013).

The computerized graphic program considered as a branch like any other form of the media educational technology. It helps create a conducive interactive media in the schools and bridges the gap in communication between the educator and the educated. Colin and McCartan (2016) discovered the fast-paced evolution of the technology in the modern age. It is difficult for the media educators without the essential practical media skills to work at optimal capacity in their job of educating students. Dickson (2009) points out that media educators need to acquire the necessary practical media skills to stay on the top of their game, because if they don't, they run the risk of learning neglected and outdated skills which will, in turn result in an incomplete and inadequate education. They need to learn new skills to excel in a fast-paced modern media world.

According to Dalal et al. (2012), the development of educational technology had provided a markedly an improved scheme of teaching and learning. Besides, every educator needs to take advantage of these technologies; Included graphic media, audio, video, images, and so on to ensure that a modern learning environment compatible with the actualities of the 21st century society.

The utilization of computerized graphic programs in the acquisition of practical media skills

by communicators, and a subsequent improvement of the teaching and mass communication media in schools is of great importance. What students see is retained longer in their memories and intellects especially when it comes in the form of modern graphic media technologies. Computerized graphic programs hold a massive advantage in the development of mass media communication in schools, and imparting communicators with the right skills in order to perform their duties outstandingly (Chen 2012).

Literature Review

Technology's big part in the modern society and student learning process is no longer new. It has come to becomes necessary to use the advancement and evolution of technology to forge and to create a better, interactive, appealing and engaging study environment for the students. This will definitely pass through a long procedure in making the study easier, faster and more fun. With the development of technology has come an innovation and transformation of the teaching and learning process.

Some studies, as referred by Noh et al. (2013) showed that the usage of modern media and computerized graphics program could make the teaching and learning process, as well as the interaction inside the school environment a superlative and attractive scene. The accessibility of the organized media technologies everywhere in the school-will work as an impetus could guarantee that the students study better. Moreover, they could enable the students to easily understand the concept of the lessons taught. Engaging different senses simultaneously in a study room creates a stimulating environment and a better chance of students actually learning as well. What students hear might forget? What they see they remember for a while? What do they say? They definitely remember. But what they experience? They will never forget. This underlines the importance of using advancements in technology to help the intellectual and educational growth and awareness of not just students, but also educators and communicators according to Omar and Bidin (2015).

The usage of visual media, like the computerized graphic programs in an internet-school journalism and educational theater as described by Choudhury (2012) helps create an easy and smooth transmission from the traditional methods of teaching; learning and the acquisition of modern practical medical skills which embraces the advancement and evolution of technology. Information could be disseminated more rapidly and easily with the use of media images for different forms. Involving students in an internet-school journalism and publishing will not just teaching them the valued practical media skills which they need to excel in a fast-paced technology controlled society, but will also rise their interest in learning, expanding their cognitive ability and stimulating their imaginations and curiosity. Therefore, opening endless doors of opportunities for them (Sethy 2012).

A recent study was conducted to determine the level of involvement of some students in the learning process when modern media was incorporated into the classroom. The students were divided into groups, each group equipped with an electronic discussion forums and chat rooms to help accelerate communication between the students. The outcome of the study mentioned by Choudhury (2012) showed that a huge percentage of the students found the discussion forums were very productive and helpful in the rapid completion of their tasks. Using e-forums proved invaluable in developing practical skills for those groups of students, and introducing them to the many potentials of modern computerized media programs and technology.

The computer programs used in the leaning process as referred by Scardamalia and Bereiter (2009) is aimed at moving away from the traditional classroom methods to support and to acquire the knowledge which imitates developing technology to acquire practical skills useful in an actual problem- solving in the industry field. Advancement in technology as referred by Spector et al. (2004) offers a challenge to review traditional concepts and ideas about the learning with the usage of media in a way to gain practical skills that will increase the capacity of communicators, so that they will be able to use the technology to create a link for linking ideas with the results.

Zoliman (2012) conducted his study, which discovered the benefit of using graphic media in the teaching and learning process. Consequently, causing a massive improvement in students' problem-solving capabilities and to motivate them to engage their faculties, to promote qualitative and quantitative reasoning that results in the quick acquisition of practical problem-solv-

ing skills. The possibilities of having educators who are more skilled in computerized graphics programs and have the proper media skills to educate students in every media school, specifically in the Northern Borders Province - Ar'ar, Saudi Arabia are still very slight. As attractive and beneficial information technology might be, and the practicality of computerized graphics programs as a learning platform, specific obstacles still need to be overcome, and this paper will seek to discuss some of these challenges. This is based on by Razak's (2013) study.

As discussed above, the computerized graphic programs are an assembly of programs such as (computer graphics, graphics software or image editing software). These programs will enable any person to manipulate visual images by using a computer. These programs are different types and the advantages and this study considered some of these programs.

The graphic technology involves the use of graphic designs and materials to pass across its message. Graphic materials or designs disseminate information in the form of illustrations and diagrams instead of words and numbers. Types of graphic technology include print technology, publications, print advertisement, website graphics, billboards, logos and branding, posters and so on. Internet-school journalism and publication apply these technologies and tools in passing vital information across in the form of images and visuals. Mastering these technologies and programs requires a high level of media skills, which is the purpose of this study.

Graphics have long been involved in the education system. Bulunmaz (2016) points out that the development of technology, in general, has made it important for the involvement of graphics in the education, this is because students now live in an electronic world of computers and all kinds of technologies, not only in the traditional classroom education setting of chalkboards, tables, notebooks, and pencils. Graphics technology considered as useful tool in education because it passes through bold and precise information with fewer margins of error. Instructional 2-or-3 dimensional materials are now used to pass instructions and curriculum materials in a method that draw the attention of the students and clearly conveys the ideas in a simple and quick way which promotes the inclusion of non-verbal and non-physical experiences in the process of education (Schwarz and Crenshaw 2011).

The education system in Saudi Arabia has passed through a long way in the past few years. The evolution of technology and the invention of the internet have imparted the use of educational media since the early 1990s. The social media boom in the past decade has also positively affected the education system in Saudi Arabia. A study by Al-Nuaim (2012) showed that the growth of information technology innovations has resulted in the use of ICT in education system, especially higher education, in the past decade. Some higher institutions, like the King Abdulaziz University based in Saudi Arabia, runs a system involves both the traditional (face-to-face) system of education and the E-system learning. This in turn requires the implementation of modern social forms, allowing students from Saudi Arabia's K-12 educational system to be able to engage in an independent study, and also to build their own personal basic knowledge.

Of course, there are still some challenges in the implementation of educational technology, especially educational media in Saudi Arabia (Kutbi 2015). The most significant issue in the usage of educational media is directly related to the success of these technologies to create optimal e-learning communities. The usage of educational media needs to accomplish the major purpose of education, which is learning. Institutions need to create a balance between implementing the educational media, and achieving the desired result of learning.

The practical skills which are related to media school require those skills to guarantee the transmission of information smoothly through different forms of media, and to provide easy access to this type of these information. It is necessary to provide an upgrade to the established traditional methods and create an interactive educational atmosphere that promotes not just learning, but also sharing. These skills as pointed out in this study included the use of the internet in school journalism and publishing, understanding and utilization of educational theater, and ability to create, analyze and share graphic materials and images that eases the flow of precise and clear information. Communicators can be trained in the use of graphic design programs for the acquisition of practical media skills in media schools by educators.

Problem Statement

This study, it is proposed to provide a solution to the urgent need of support skills training for communicators and to help them acquire media practical skills. This was achieved by using a random sample of high and intermediate schools in Ar'ar city, the administrative capital city of northern border province.

Significance of the Study

The study discovered the problems related to media communication in schools in order to find practical solutions that could effectively solve these problems. Moreover, it investigated the design of computerized program depending on graphics technology and measured its impact in equipping those in charge of communication media in schools with practical media skills. The study engaged the community service in Ar'ar's Northern Border Region, and provided practical training program for media school communicators to raise their media skills level which will reflect positively on the education system and school environment, and the level and performance of students also while keeping pace with the modern global trends in the development of modern media school program as opposed to traditional methods. It also aimed at educating the media communicators in charge of media communication in middle and high schools in the northern border region with proper media skills in the area of internet-school journalism and publishing, educational theater and media image and photography. And to employ modern techniques in the design and production of computerized graphics technology programs depending on the participation and interaction of communicators in media school, thus raising the professional level of training and skill they possess, resulting in an improved educational performance of students. It also applied computerized program to provide some media skills to other geographical areas in the world, especially in North Africa and the third world countries.

Objectives

The study seeks to explore the following aims:

- Identifying the required media practical skills for those in charge of educational media in schools; the skills to use the internet-school journalism and publishing, educational theater skills and the skills required to use media image and photography.
- Impacting on the use of computerized design programs based on the use and recruitment of graphics technology to support the participation of those control the school's interactive media.
- Measuring the impact of the proposed computerized graphic program in giving communicators in media schools the needed practical skills.

Definitions

Terms used in study are defined below:

Computerized Graphic Programs: According to Sam and Rajan (2013), it is a collection of programs (computer graphics, graphics software or image editing software) that enables a person to design and manipulate visual images on a computer.

Media School: Schools that use multilingual information process skills in the fields of paper and electronic publishing and educational theater and school journalism and multimedia.

Media Skills: The ability of a person to create, analyze, evaluate, and disseminate information through a broad range of media forms at the schools.

Media Educators (Communicator): A person with media education responsible for educating, informing and equipping students with media skills competency in media schools.

METHODOLOGY

The study aims at answering the following questions: The first question is: Will computerized graphics program be effective in equipping communicators with the required practical media skills in media school? The second question is: Will a communicator with practical media skills be more effective in the dissemination of information and maximizing media communication potentials that a communicator without practical media skills? And the third question is: Will the teaching and learning of students in media schools, the release of information through media means and overall academic and practical performance of communicators and students in

media schools in the Ar'ar region of Saudi Arabia improve with the introduction of computerized media graphic programs?

The study was conducted using an experimental method, using a 5-point Likert scale system to examine the level of the media skills of media communicators in media schools in the areas of the use of internet-school press and publishing skills, educational theater skills and media image information skills. The five choices were Strongly Disagree, Disagree, Neither Disagree or Agree, Strongly Disagree.

The study was conducted using a pre-test and post-test procedure with the test in-between being a tutorial in graphic design using graphic programs and software. The computer programs used in the graphic design programs for the study included Adobe Photoshop CS6, Sony Vegas Pro 13, Flash MX, Adobe after Effects CS6, PowerPoint, Camtasia, Video Capture Master and AutoPlay Media Studio 8.

The experiment was conducted by specialists in the areas of educational media and instructional technology to examine the level of these practical media skills in detail, and compare the impact that computerized graphic program has in equipping media communicators and educators with practical media skills, and the difference in their level of performance with and without the acquired media skills.

Sample

The study was limited to the northern border area city of 'Ar'ar' in northern Saudi Arabia. It was limited to the mass communicators in media school, both males and females. Only 17 schools (preparatory and secondary schools) were used. Nine intermediate schools (six males and three females) and eight secondary schools (five males and three females) were used in the study. Thus, the total population who participated in this study were 34 mass communicators (two participants from each school) in the school year 2016-2017.

RESULTS

The results of the pretest procedure and the post-test showed that a large percentage of the participants, about 22 (64.7%) have a good level of internet skills and know how to search online, familiar with the Internet search tools and methods of security, uploading and sharing files on the internet, using social networking sites, and handling sites on the internet as observed in the study conducted by Duarte (2013). Many also used the internet on their phones and knew how to use browsers to search for data. About 16 (47%) used school website, but they do not communicate with the students on the social media. Moreover, 10 (29.4%) had school press and publishing skills, but only 4 (11.7%) are active in designing or supervising the release of school publications, and only about 6 (17.6%) were familiar the methods of electronic publishing. Additionally, 10 (29.4%) have educational theater skills (including theater building elements, methods of theatrical play, theatrical lightning techniques, theater arts, good use of theatrical movements on stage, role playing, usage of innovative drama school theater and so on.) and use them in their curriculum while only 14 (41.7%) had photographic or image processing skills. The results are represented in Table 1.

The post-test procedure showed a marked increase in the level of media skills with 28 (82.3%) showing an increased internet skills in areas including knowing how to search online, familiarity with internet search tools and methods of security, uploading and sharing files on the internet, using social networking sites, and handling sites on the internet, how to use internet browser and search on the phone. Also, 20 (58.8%) showed an increase in school press and publishing skills in areas including palm press type and kinds, writing press releases, participating in industry press, design of electronic newspaper, methods of electronic publishing and so on. And 18 (52.94%) showed an increase in educational theater skills in areas including the-

Table 1: Percentages for the results of the pre-test procedure and the post-test for media skills

Practical media skills	*Pre-test*	*Percentage (%)*	*Post-test*	*Percentage (%)*
Internet skills	22	64.7	28	82.3
School press skills	10	29.4	20	58.8
Educational theater skills	10	29.4	18	52.94
Media image and photography skills	14	41.7	30	88.8

ater building elements, methods of theatrical play, theatrical lightning techniques, theater arts, good use of theatrical movements on stage, role playing, use of innovative drama school theater and so on, and 30 (88.8%) showed an increased image type and photography skills, like handling digital photographic cameras and techniques, photographic composition skills, image processing for publication, choosing images for advertising, learning the foundation of mobile photography, editing of video footage and so on.

The results of the study experiment showed that the use of computerized graphics program is effective for the requirements of mass communicators in acquiring practical media skills and to be able to apply those skills in their work. Although the general knowledge of the internet is good. The study also showed that mass communicators need a good level of training on how to fully maximize the huge potential of the internet and internet-based communications to improve their performances with students, and their level of media skills generally.

Although the experiment proved that it is relatively succeeded with a small population of participants, bigger trials and studies covering a larger pool of participants is necessary to fully understand the impact of computerized graphics programs in the acquisition of practical media skills by mass communicators in media schools.

The study also showed that more long-term and basic training are required for mass communicators if they are to acquire the media skills required for improving their performances in media schools, particularly in the areas of educational theater. This also showed the requirement of media educators and mass communicators to have a basic background in both media education coupled with a few professional experience and insights in the media industry where the media technologies are being applied every day.

DISCUSSION

The pre-test procedure used a five Likert scale method of experiment which was divided into four categories of skills, (internet skills, school press and publishing skills, educational theater skills and media image information skills), each category was ranging between 9 - 14 statements to which the participants are supposed to indicate their level of agreement or disagreement with the statement, and the response options were Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree (Friedman 2016).

The actual test was a tutorial in graphic design using graphic programs and software with the aim of equipping the participants with the practical media skills required in mass communicators in media school.

The post-test procedure also administered the same 5-point Likert scale method from the pre-test procedure, to understand the impact of the graphic designs tutorial on the participants and to compare the results with the post-test procedure.

The graphics tutorial section of the experiment which discussed important topics on the areas of the use of the internet, school press and publishing skills, educational skills, and media image skills. These skills were considered in details used a different computerized graphics program. The section on internet skills discussed found ways on the internet, used an internet search engine, downloading files and programs, how to upload files, how to save image and video, how to use social network sites and so on. The section on school press and publishing skills discussed types of release, press release industry, how to design an electronic newspaper, how to quote press releases, electronic publishing methods and so on. According to Nidal (2016), the section on educational theater discussed the educational role of theater, theater curriculum, split stage, theater movements, and so on; and the section on media image and photography discussed cameras and digital pictures, configuration of pictures, digital video cameras, montage of video clips, and so on.

Chi- square was used to measure whether or not there is homogeneity or uniformity on the views of communicators about different paragraphs for each field of study scale of practical media.

CONCLUSION

The Impact of the Computer Graphics Program

The study showed that computerized graphic program, when properly applied and used in the training of communicators, has an immense and positive influence on their level of practical media skills. The positive results and improve-

ment in the media skills of communicators in the area of internet use, school journalism and publishing, educational theater, and also media image showed that the use of computer graphics program in acquisition of practical media skills have a major impact on the communicators participating in the experiment, and their increased level of media practical skills.

Acquisition of Media Skills

It is an important for all mass communicators in charge of media school to have the necessary practical media skills. This study indicated that with the appropriate training and skills, communicators with media skills could be more effective in managing the tasks of media schools than those without the necessary skills.

Educational Impact on Students

The quick acquisition of some media skills by communicators during the period of experiment showed that the education of students in media schools, specifically in Ar'ar region of Saudi Arabia, and their use of media skills in school journalism, usage of internet, educational theater and media image can be improved by the utilization of computerized graphic program and other graphic technologies.

RECOMMENDATIONS

Based on the results of the study that indicated the impact of the use of educational technology and the graphic skills in the media schools. The study provides the following recommendations:

- Providing training programs for mass communicators in media schools by relying on the use of graphics technology for the development of media practical skills instead of the ancient methods.
- Expanding the use of graphic techniques in the teaching of courses and supporting the different stages of education.
- Providing theoretical side support in media schools using multimedia.
- Engaging in further studies linking educational media with education technology.

These recommendations should be applied for the benefit of several other countries in North Africa and the third world countries.

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REFERENCES

Aduwa-Ogiegbaen SE, Iyamun EOS 2005. Using information and communication technology in secondary schools in Nigeria (Problems and prospects). *Educational Technology & Society,* 8(1): 104-112.4.

Al-Nuaim HA 2012. The Use of Virtual Classrooms in E-learning: A Case Study in King Abdulaziz University, Saudi Arabia. Saudi Arabia e-Learning and Digital Media, Volume 9. From <www.wwwords.co.uk/ELEA> (Retrieved on 17 February 2016).

Bulunmaz B 2016. An Evaluation on the Analysis of Communication Faculties and Education System Compliance with New Communication Technologies in Turkey. SHS Web of Conferences. From <http://dx.doi.org/10.1051/shsconf/20162601017> (Retrieved on 2 March 2016).

Chen CY 2012. Research on the learning effects of multimedia assisted instruction using information technology model. *International Journal of Educational Administration and Policy Studies*, 4(3): 2-3.

Choudhury B, Gouldsborough I 2012. *The Use of Electronic Media to Develop Transferable Skills in Science Students Studying Anatomy.* American Association of Anatomists. Manchester, United Kingdom: University of Manchester.

Dalal M 2014. Impact of multi-media tutorials in a computer science laboratory course-An empirical study. *Electronic Journal of E-Learning,* 12(4): 7.

Dickson T 2009. *Mass Media Education in Transition. (Preparing for the 21st Century).* Southwest Missouri State University: Taylor & Francis e-Library.

Duarte R , Cazelli S, Migliora RP, Coimbra CA 2013. Computer skills and digital media uses among young students in Rio de Janeiro. *Education Policy Analysis Archives,* 21(53): 10.

Herrmann Robert B 2013. Computer programs in seismology (An evolving tool for instruction and research). *Seismological Research Letters,* 84(6): 1081-1088. doi:10.1785/0220110096.

Jordan F 2016. Boost Social Media Skills With Online Courses. *U.S. News and World Report.*

Kutbi AI 2015. *How Undergraduate Female Students in the Kingdom of Saudi Arabia Perceive Social Media as a Learning Tool: (An Exploratory Study).* Scholarship at UWinds. Ontario, Canada: University of Windsor.

Nidal ZA 2016. Beyond segmented instructional animation and its role in enrichment of education and technology. International Journal of Computer Graphics & Animation (IJCGA) Vol.6, No.3, July 2016. From <http://aircconline.com/ijcga/V6N3/6316ijcga02.pdf> (Retrieved on 12 July 2016).

Noh MA, Rinaldi R, Hussin NH, Tali NH 2013. The relationship between the attitudes of Islamic educa-

tion lecturers towards the application and knowledge of multimedia in teaching. *Asian Social Science*, 9(11): 5-6.

Nusir S, Alsmadi I, Al-Kabi M, Sharadgah F 2012. Studying the impact of using multimedia interactive programs on children's ability to learn basic math skills. *Acta Didactica Napocensia*, 5(2): 12.

Omar S, Bidin A 2015. The impact of multimedia graphic and text with autistic learners in reading. *Universal Journal of Educational Research*, 3(12): 5.

Razak RA 2013. Shared knowledge among graphic designers, instructional designers and subject matter experts in designing multimedia-based instructional media. *Turkish Online Journal of Educational Technology - TOJET*, 12(3): 9-10.

Robson Colin, Kieran McCartan 2016. *Real World Research. A Resource for Users of Social Research Methods in Applied Settings*. Hoboken, New Jersey, United States: Wiley.

Sam DP, Rajan P 2013. Using graphic organizers to improve reading comprehension skills for the middle school ESL students. *English Language Teaching*, 6(2): 155-170.

Scardamalia M, Bereiter C 2009. Computer support for knowledge-building communities. *Journal of the Learning Science*. 3(3): 265-283.

Schwarz G, Crenshaw C 2011. Old media. New media (The graphic novel as Bildungsroman). *Journal of Media Literacy Education*, 3(1): 6.

Sethy SS 2012. Cognitive skills) A modest way of learning through technology). *Turkish Online Journal of Distance Education*, 13(3): 2.

Spector J.M , Merrill M.D, Elen J, Bishop M.J 2008. *Handbook of Research on Educational Communications and Technology*. Association for Educational Communications and Technology. UK: Taylor & Francis e-Library.

Zoliman A 2012. Write is right (Using graphic organizers to improve student mathematical problem solving). *Investigations in Mathematics Learning*, 4(3): 50.

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