

Good example of research paper on engaging learners with the computers

[Technology](#), [Internet](#)



- With the growing and changing needs in the education sector, the use of computers and technology has become the best alternative solution to imparting knowledge and skills to the learners. Use of computers has achieved tremendous success in improving learning outcomes to the learners since it enhances an improved instructional methodology to the teachers or instructors.
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- Computers in learning makes it more interactive than the traditional lecture methods.
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- Computers aligns the learner's development needs with personal motivation and interests.
- Computers allow the students or learners to find new data or information that is more real and practical in their learning process.

- Computers enable learners to apply newly acquired skills in a real life situation.
- Potential risks of using computers in the learning process
- Some information obtained from the computers or the internet is not credible.
- Computers are vulnerable to the loss of information stored in them and as such may interrupt the learning process.
- The internet is associated to pornographic movies that distract learners from concentrating on important educative information.
- Some learners over concentrates on computer games that are not educative.

6. Enhancing use of Computers in the Learning Process

- Students and teachers should have professional knowledge on the use of computers in accessing educational information.
- There is a need to use updated information from credible sources.
- The school computers should be made inaccessible to non-educative contents such as pornographic movies to enable the learners only access the educative contents.
- There is a need to install back-up for all data available for learning purposes in the educational set up.
- Conclusion
- Computer plays a crucial role in learning the process to determine the level of learning outcomes to the learners or students. However, the use of computers is prone to some potential risks that should be considered in designing incorporation of computers in the learning process.

Introduction

With the growing and changing needs in the education sector, the use of computers and technology has become the best alternative solution to imparting knowledge and skills to the learners. According to Mayer and Moreno (2002), before the integration of computers into learning system, the education system faced various challenges that hindered it from achieving the anticipated high learning outcomes. More precisely, poor methods of instructions as well as instructional materials attributed to this. Gregor (2008) revealed that, the prior used pedagogical approach to teaching and learning has failed to address the changing needs of the student in the context of classroom matters. Use of computers has achieved tremendous success in improving learning outcomes to the learners since it enhances an improved instructional methodology to the teachers or instructors.

Cher (2006) found out that, the 21st century learner is characterized by different learning styles that must be catered for by the modern system of education. Ideally, the learning styles have changed from instructional to learner centered that requires the learners to be provided with adequate instructional materials to achieve their learning objectives. This prompts for the need of integration of computers into our modern classrooms. Michele (2005) noted that, the learning tools and resource should, therefore, be available to the learners in order to realize their potentials. Just to highlight, this is only possible with the incorporation of computers into learning. As such, this research paper objectively looks on how the students or learners can use computers to improve their learning? In addition, the paper examines the multiple roles played by computers into learning system.

Lastly, how the use of computers aids teachers in disseminating new concepts and skills to learners?

Importance of Computers in the Learning Process

Computers and constructivist learning

Computers support learning in various ways to the learners as well as the course instructors. According to Shank (2007), computers play a crucial role in enabling the learners to construct their understanding. Learning is a process that entails gathering of information from various resources to ensure a learner or student understands the concept. Through the use of computers, the learners or the students can search for various information on the internet and use them appropriately as per the requirement of an educational outcome. Michele (2005) notes that, with the search of the information from the internet enables the learners independent and they can constructs meaning of concepts and new skills on their own. The learners can determine the sources to examine as well as appropriate materials to use provided they follow the guidelines to be used as set by instructors or teachers. In addition, the learners explore the topics they want and search for adequate information related to those topics.

According to Gregor (2008), learners in a technology armed classrooms achieves high educational outcomes compared to those who utilizes the traditional approaches to learning. Technology adequately provides the students or learners with platforms to gather and share educational information. Through the technological platforms, the learners can consult colleagues and presents facts on their topic of interest. Mayer and Moreno

(2002) argues that, with the technology, the learners' autonomy surpasses the teacher's involvement in the learning activities. This increases the learners' confidence to handle and complete tasks as set by the teachers. Suffice to say, the learners can create their knowledge through this initiative.

According to Pivec (2006), the use of modern internet in learning changes the role students in the learning process. Ideally, the utilization of technology enables students or learners to search sources of information, manipulate the information in a way that accelerates learning in the perspective of understanding. Additionally, the technology enables the learners to make progressive steps to higher-thinking skills. Cher (2006) urged that, regularly, the students gets more real-world information beyond the school level and publishes their findings to the world. In fact, the role of student in the learning process expounded to that of the investigator rather than that of the recipient of knowledge in class. They become designers, surveyors, authors of their piece of work.

Computers and Teacher Aid in teaching and learning process

The incorporation of computers in learning improves the rate at which the teachers interact with their learners. According to Michele (2005), use of computers simplifies the resources that teachers present to their learners or students. Instead of relying on limited resources available in the school, the teachers can access more materials online. Gregor (2008) argues that, rather than relying on the school library text books for the concepts or content to be delivered to the learners, the teacher can provide links to

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online access to materials for the students to explore. Usually, there are online content experts that have up-to-date data that is suitable for current learning process. When the students are directed by teachers to this links, they can utilize vital information that enhances content understanding. On the other hand, the reference materials that are usually stored on CD-ROMs allow the students to access critical information regarding the content or concept from varying sources. In his report Cher (2004) acknowledges, this enables the students to compare information about the content from different sources. Besides, computers provide curriculum support that is based on high-quality software. This offers teachers with more resource opportunity in creating a modern and elaborate classroom environment that school libraries or most classroom cannot provide.

According to Bousmar et al. (2010), integration of technology into the learning process enables teachers to expand, guide and enhance learning objectives to the learners. Just based on the basic understanding of computer realizes great outcomes to the students by great extent. The students are directed by teachers on which search engines to use while looking for specific information. Shank (2007) noted that, with teachers directives the learners or students can get information on a timely manner. This enables them to synthesis, analyze and present the information effectively. As such, technology is an integral part of classroom function that enables students to access the needed information in the course of their learning process.

Computers have various benefits to the teaching as well as learning processes in the modern classroom. However, this depends on whether the

teachers and learners are quite relevant with the use of computers in the classroom situation. Gregor (2008) noted that, both the teachers and the learners require basic knowledge of computers for their use to be efficient in the learning process. The application of technology should be properly understood by the students in order to experience high learning outcomes. According to Michele (2005), the common classroom teachers or course instructors should have basic troubleshooting knowledge that will assist the learners in case of some technical problems. Though not technicians as such but they should be able to know basic measures that can help in case of unnecessary computer breakdowns. As such, it is necessary for the school administrators to provide curricula support to teachers. Professionalism in the use of computers ensures efficiency of their use in the classroom as well as outside classroom situation. In this regard, the learners are also able to acquire professional skills in the search of information using the modern technology.

Software's that have ensured learning process is enhanced through the use of the computers

Based on the various uses of computers in the classroom situation, there are five software that have been utilized by teachers to realize high learning outcomes to the learners or students. This instructional software enables learners to interact with teachers during the learning process to realize the learning good to the students.

Computer Drill Practice and Learning process

First, the Drill and Practice software ensures that students workout problems, submit their answers, and get instant feedback or response on the appropriateness of their answers. According to Cher (2006), this modern approach to learning enables the students or learners to get immediate feedback that motivates them to solve many problems. Based on this, the traditional homework or assignment can be replaced by this simple software that helps the students learn and prepare for tests. The best way to handle the changing learning needs of students. Second, the computers enable the teachers to utilize tutorials as a means of instruction approach. Most teachers in the current education setup utilize tutorials as a unit of teaching approach. The linear tutorials enable learners to get instructions as well as feedback for the varying answers that they might have. In addition, branching tutorials enables learners or students to access different paths in the learning process through different methods of getting credible answers to their questions. Suffice to quote that, appropriate tutorial software promotes learning through access of immediate feedback.

Computer Simulation software and learning process

Moreover, the teacher does not need to be physically present in class. Simulation is a computerized model that is used even without the presence of teachers in class. According to Carbonara (2005), the simulation software enables the students or learners to appropriately select tasks to handle. More precisely, there are two types of simulation, the one that instructs learners on contents and the other that directs the learners on how handle

the task. Sciences are never abstract subjects; the utilization of simulation in this field enables the learners to practically gain knowledge on how to handle the tasks. Gregor (2008) reveals that, simulation makes learning to be fast since it compresses time by getting students or learners involved.

Additionally, this method is cost effective compared to the traditional procedural experiments that took a lot of student's learning time. And more importantly, simulation enables the learners to understand and comprehend complex processes or concepts.

Computer instructional games and learning process

Nonetheless, computers incorporate the use of instructional games into the learning process. According to Pivec (2006), the learning process should engage appealing instruction methods that enable the learners develop interest in the instruction process. The instructional games are quite appealing to the learners and as such, they attract the learners' attention thereby enabling the students to gain new knowledge through experience. Stahl, Koschmann and Suthers (2006) notes that, these computer instructional game make learning look like fun to the students. This makes the learners even to learn new complex concepts that they would not have learnt in a serious and intense classroom environment. According to Michele (2005), the games help the learners to embrace the importance cooperative group working skills that enable them share on difficult concepts that they do not understand on their own. Group workings are important in learning new concepts. The students who are weak can get relevant information from other learners even without the teachers' presence or support.

Computer problem-solving skills and learning process

Lastly, computers allow the students to develop superior problem-solving skills. Through the computer instructional games and simulations, the learners can utilize their skills to answer the question and get immediate feedback to their answers. According to Cher (2004), the problem-solving software enables the learners to practice problem-solving in various content areas. Precisely, it provides the learners with the opportunity to learn without the assistance of teachers to acquire new concepts especially in subjects that they have difficulty in. Mayer and Moreno (2002) reveals that, this computer application in learning prevents inert knowledge. It promotes interest and motivates learners to explore for more information about a particular subject. In addition, it allows the teachers to give instructions on component skills as well as encourage the students to solve problems continuously.

General advantages of use of computers in learning processes

As discussed above, computers are seen as a means of accelerating learning in a normal classroom environment. In fact, Cher (2006) reveals that, use of computers has various general benefits to the learners rather than the specific attributes. The use of computers in learning makes it more interactive more than the traditional lecture methods. Through the discussion and software boards, the learners as well as course instructors can interact and discuss course contents that enhance understanding of the new concepts to the learners. The exchange of ideas is quite important to any learning environment. For instance, through the use of LCDs, the

learners can watch, picture, analyze and understand what the teacher is presenting to them. In addition, computers add the learners' opportunity of interacting with others to internalize the new concept (Michele, 2005). They watch the experiment done by others and practically make trials in order to achieve perfection.

Where else, the traditional approaches could approve futile, the usage of computers aligns the learner's development needs with personal motivation and interests. According to Pivec (2006), the computers allow the students or learners to constantly find new data or information that is more real and practical in their learning process. Suffice to say, the learners can picture and utilize information three dimensionally. In addition, computers enable learners to apply new acquired skills in the real life situation. The major agenda of education is to give students relevant skills that they can apply in the society. Carbonara (2005) reveals that, learners are able to access vital information from the computer is able to share them with their families as well as the general society. This is very important in nation building or development as well. Justified to say that, the use of computers in learning enables the learners to see the concepts clearer and even willing to relate the knowledge to the society as well as family members.

Potential risks of using computers in the learning process

Even though, the use of computers has various benefits to the students, teachers and the learning outcomes, it has potential risks too that should be considered in its application to learning process. First, some information obtained from the computers or the internets are not credible. Use of such

information leads to use of wrong information in interpreting and understanding of new concepts by learners. According to Gregor (2008), some sources available in the internet are incredible and as such gives misleading information. Moreover, the computers are vulnerable to the loss of information stored in them and as such may interrupt the learning process. Cher (2004) argues that, data stored in the computers can be lost as a result of a virus attack on the computer.

Nevertheless, while most teachers overemphasize the use of computers for learning, some learners use them for other purposes other than learning. The internet currently is associated to pornographic movies that distract learners from concentrating on important educative information. In addition, some learners over concentrates on computer games that are not educative and this leads to wrong purpose of computers in the learning process.

Enhancing use of computers in the learning process

Since the use of computers can be linked to various risk, there is need to integrate it into learning with proper management. First, the students as well as teachers should have professional knowledge on the use of computers in accessing educational information. As such, the administrators of schools should allocate resources to enable the teachers and learners acquire and develop computer skills for it to be incorporated in the learning process (Bousmar et al., 2010). Moreover, since the information available in the internet might be incredible, there is need to use updated information from credible sources. In addition, the school computers should be made inaccessible to non-educative contents such as pornographic movies to

enable the learners only access the educative contents. In regard to loss of contents and information, there is need to install back-up for all data available for learning purposes in the educational set up. This can hinder the stored data from being lost or corrupted by Trojan or other infectious computer viruses.

Conclusion

Computer plays a crucial role in learning process to determine the level of learning outcomes to the learners or students. It enhances the speed at which the learners access and process information in acquiring and utilization of new concepts. According to Cher (2006), the learners are able to get various vital information about the content materials presented to them by the teachers. In fact, the teachers that use the computers accurately, can experience high learning outcomes from their students. More precisely, it creates a warm learning environment to the learners or students. However, the use of computers is prone to some potential risks that should be considered in designing incorporation of computers in the learning process. As such, the computer should be used appropriately for the good of learning process. It should start with teachers and students having relevant information on the use of computers to access educational content. Additionally, the teachers should only direct the students to appropriate links that have relevant information.

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