**Computer-Aided Education**

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Among various sectors that have benefited from the adoption of computers to survive the COVID pandemic, education has been an active front runner. This pandemic situation transforms computer-based education from an optional tool to a mandatory tool of continuous learning.

**What is CAE?**

Computer-Aided Education(CAE) refers to the use of the computer as a tool to facilitate and improve the education system. It enables students to learn from a combination of technology and curriculum. This is to ensure more of an interactive learning experience, contributing to the overall success of the learning strategy.

**Types of Software used for Computer-Assisted Education**

**1) Drill and Practice:-** Drill and practice software is generally used the same way that worksheets or flashcards are used in classrooms. This type of software provides feedback to the students. Flashcard Deluxe app is the best example of this type of software that provides the user with review opportunities and feedback as they answer the questions

**2) Tutorial:-** Tutorial software is an instructional sequence on a topic that is similar to the teacher’s instructions in the classroom. They are mean to be used as a self-contained supplemental instructional resource.

**3) Problem Solving:-** Problem-solving software focuses on developing problem-solving skills. The main purpose of this software is to strengthen observing, analyzing, recalling abilities. Some examples of this software are MindManager, Layered process audit software, etc.

**4) Simulation:-** A simulation is a representation or model of a real event, object, or phenomenon where learners can see the results of their actions. This is a very powerful application of computers and the educational community can capitalize on this type of software. Examples of this type of software are AnyLogic, MATLAB, etc.

**5) Games Software:-** Game Softwares are the best way to learn and grasp concepts. Many games are learning-specific and fun too. Scratch can be considered as a great example of this type of software which provides colorful blocks and cartoon characters to learn to code for kids. Grammar Gorillas, Geoguesser are some other examples of gaming software.

**Advantages of CAE**

CAE provides many advantages to the education sector. These includes:

**· Self paced Learning:-**CAE is individualized, students can learn at their own pace which eliminates peer pressure. They can repeat any topic as many times as they want. There is a choice for them to skip over a topic if they have a grip over it. This provides a solution to fast and slow learners

**· Self Evaluation:-** CAE provides a reporting system through which students can analyze their progress. Many tutorials come with progress bars and deadlines that make evaluations of learning from time to time and helps students to get rid of procrastination.

**· Structured Content:-** Everything is available on the internet in a scattered manner and finding the right content wastes a lot of time.CAE provides information in a structured manner thus, saves time and makes learning more efficient.

**· Visualizations:-** It makes difficult concepts easy with the help of visuals. Students can retain difficult concepts and this reduces teaching time. visualizations help to boost the natural way of learning.

**Impediments of CAE**

Agreed that teaching with visualizations is an integral part of CAE, the most important objective is that the students should learn and understand what is being taught; otherwise, Other features of computers can distract students from the course content. The teacher should try to maintain a balance between student and computer interaction**.**

some other impediments are listed below:

* Financial problems may refrain some students from owning a computer, placing them at a disadvantage of efficient learning.
* Content covered by certain tutorials may become outdated.
* CAE-based learning requires network access, technical issues can cause major problems.
* Though some software like simulation, permits the execution of chemical and biological experiments, hands-on experience is missing.

**Conclusion**

Computer-assisted Education has the potential to totally transform the education process and remarkably improve the efficiency of learning by providing great motivation to Students. With all the great features CAE has to offer, we would like to add a word of caution here, overuse of multimedia may divert the attention from the content and learning becomes too mechanical. So the balance used of technology under the guidance and supervision of teachers has a great potential to transform the learning process.