COMPUTER ASSISTED EDUCATION

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WHAT IT IS

Computer Assisted Education, also known as Computer Assisted Learning or CAL for short. Is the use of computers and technology in a classroom or at home setting to assist with or provide education. Its use varies from school to school, as some may choose to use it for submission of assignments while others to provide full lectures and lecture notes online.

It's also the use of educational games to engage with students, especially a younger audience, or the use of software to provide real-life simulations of subjects not readily available.

HISTORY

- Computer Assisted Education has been around for longer than just the 21st century, the use of it began in the 1960's.
- Throughout its early years it was mainly based on the use of MP3 Players, or VHS/DVD Players to show kids educational videos.
- In the 1990's the use of word processors was introduced in schools and universities which brought about classes dedicated to teaching the fundamentals of the usage of a computers as well as software packages such as Microsoft Office.
- This also brought about the creation and use of educational games, especially catered towards the younger students since younger students were more engaged in such lessons.
- In recent years Computer Assisted Education has greatly widened its scope of assistance by not only providing students with resources on the internet but also the ability to submit assignments through dedicated University websites, receive notes from lecturers or even the possibility to attend classes online.

AVAILABILITY

- Can students or parents afford laptops, iPads or other devices that would be used in at home CAL. If not, is there funding or sponsorship available through schools or the government.
- Most secondary schools already provide an iPad, laptop or surface Pro (depending on the school and needs)to students with dyslexia or similar learning disabilities, that is owned by the school, but the student can use it for the duration of the academic year both in school and at home
- Another problem which occurs with the availability of CAL is having internet access for materials provided online. Students who live in rural areas that don't have a high internet speed or others might only have a limited broadband which wouldn't allow for watching lectures daily or maybe even weekly. The other problem with limited broadband is other family members might use it for work which would limit the speed even more or only allow the student to access the internet at certain times which may not be ideal
- There is an abundance of information on the internet which allows for students to do research on topics they struggle with by having the option to find more examples and books about the subject.
- There is also material on the internet that can't always be accessed in person such as videos on medical procedures for medical students and applications mimicking tsunamis or earthquakes.
- There are also devices created to help in the medical practice such as a robot giving birth to make available to students the practice of this procedure multiple times without real-life consequences.

BENEFITS

- Students with learning disabilities have access to programs such as Grammarly, or text to speech. As well as this lecturers have the ability to provide the student with more readable notes online, especially if their lectures are based on the students self notetaking which would be difficult for someone with for example dyslexia.
- CAL also benefits students with illnesses or disabilities that cause the student to miss multiple days and fall behind on class material. They can access homework assignments online to be caught up with the lessons. Resources would also be available to them that could help them study at home like direct contact with the teacher for any help or extra material given by the teacher that would normally be explained in class and not necessarily in textbooks or notes.
- CAL doesn't just mean showing videos or interactive games it also helps the teacher in assessing each student as an individual or the whole class as a collective group. This benefits the teacher as they can see the progress of those students who are not always in class or might be embarrassed to ask for help. The information about the class as a collective helps the teacher to structure lessons accordingly .
- Other benefits of CAL are being able to have accurate and up to date information especially for courses or subjects where information is always being updated like in medical school.

ISSUES

- With automation of testing and education, younger struggling students who need personal support and individual customised lessons from the educator are more likely to go unnoticed.
- The correction methods of computers are fairly limited. So, as more educators turn to automated correction, the computer can quite frequently make mistakes in the marking, for example, getting your answer wrong based on a grammatical error or misspelling that the correction program wasn't able to comprehend.
- The correction style of automated testing limits educators to multiple choice questions or similarly easily marked question types.
- The ease of accessing information makes the act of cheating much easier. By simply searching the exact questions online students would be able to find professional answers.
- The abundance of information also contains a lot of false information. With the anonymity of users and the loose restrictions of the internet, a lot of information can be easily fabricated and spread.

CONCLUSION

The use of technology has impacted education in a mostly positive way by allowing access to the vast amount of resources and easier communication between students and lecturers, to give a fair opportunity to disadvantaged students and to keep information accurate. Though it may have its faults technology is always improving and the coexistence of education and computers will no doubt continue to be a topic of inquiry for researchers of learning and developers of technological solutions alike for many years to come.