Innovative Teaching Strategies with Simulation Technology

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Abstract : *Developing innovative teaching methods by using simulation technology in technical education requires the improvement of strategies and a shift from teacher-centered to student-centered learning. Using simulation technology promotes critical thinking and clinical reasoning skills in technical education. Although most technical educator's value student centered learning, they often rely on familiar teaching strategies and methodologies that are focused on teacher-centered learning. Identifying the challenges with simulation in technical education can lead to the development of a framework for the design and implementation of newer methods to improve learning outcomes. Evaluating these methods will validate the effectiveness of simulation technology.*

Key Words: *simulation technology, teaching methods, student-centered learning.*

INTRODUCTION

The objective of this work is to incorporate technology into teaching learning methods to create a rich learning experience for students and a rewarding teaching experience for faculty. The two educational models practiced across the globe are face to face learning and hybrid learning the traditional method of teaching and learning is synchronous and typically involves the employment of a classroom where professor and students interact within time and space. This model of teaching is called synchronous. Interactions with face to face and distance learning techniques to disseminate information to members of a learning community. This type of learning blends technology based asynchronous teaching method and traditional teaching method. The asynchronous or hybrid teaching has following advantages. It motivates the learning process. It offers time flexibility for part time job or other assignment holders. It reduces overcrowded classrooms. Faculty can add more instructions overtime and maximizes student learning. The hybrid teaching model Students perspective is that they can interact better with the faculty and classmates remain engaged. Soft skills, critical thinking and problem solving. Compute skill and technical skills of students increase. Faculty perspective is that they accomplish course teaching objective better, can re-evaluate course work material. The effectiveness of in-class activity increases. It encourages out-of-class learning.

Teaching with Technology
Why Technology

Teaching with technology engages students with different kinds of stimuli involve in activity based learning. Technology makes material more interesting. It makes students and teachers more media literate. Technology is a means to justify the end of composition outcomes and has become a seamless extension of the curriculum in the classroom. Technological Pedagogical Content Knowledge captures the qualities of this new hybrid educator who must find his or her place between the intersections of these qualities. To most effectively teach technology, we must model that technology within our disciplines and classes Voice Threads to Build Student Engagement Voice Thread is a web service that allows users to upload PowerPoint slides, videos, photos, etc. And add voice narration to create a multimedia presentation. Voice Thread is an application that runs inside your web browser and it allows you to transform collections of media, like images, videos, documents, and presentations, into a place for a conversation. These conversations are not live, but take place whenever it's convenient for the people to participate. They are also secure, with simple controls that let you dictate who can participate and what they can do. Educators use Voice Thread for many different reasons, from extending and documenting classroom conversations, online tutoring, virtual class spaces, professional development training, and a thousand things in between. The advantages of the voice thread are as follows. It starts student driven discussions with better understanding. It is a great way to deliver projects and solicit feedback. The information about voice threads is available on the following links

Blogging

Blogging is a public post. Blogging for study sessions is to be practiced. Students can post case studies in a class blog. Students can be asked to post notes on class blog. You can analyze, evaluate and create the material. Blogging causes you to reflect. Teachers naturally think back on what has happened in their classroom, and often wonder what they could have done better. Blogging can help with this process, enabling teachers to keep an ongoing personal record of their actions, decisions, though processes, successes and failures, and issues they have to deal with. Blogging can crystallize your thinking. As we write, we invest a part of ourselves into the medium. The provisionally of the medium makes blogging conducive to drafting and redrafting. The act of composing and recomposing ideas can enable abstract thoughts to become more concrete. Your ideas are now on the screen in front of you; they can be stored, retrieved and reconstructed as your ideas become clearer. You don't have to publish if you want to keep those thoughts private. Save them and come back to them later. The blog can act as a kind of mirror to show you what you are thinking. Sometimes we don't really know what we are thinking until we actually write it down in a physical format.

Prezi–Your Presentations

Prezi is a new way to do the presentations. Prezi is a versatile app that lets you make professional-looking

presentations. It's like a free, pared-down version of PowerPoint. Prezi lets you make presentations that are as casual or as professional as you want them to be. It allows you to add information to a prezi organize it in a logical way, embellish it with audio and video and then share it with the people you need to reach. Prezi makes making a presentation very easy. The whole app flows very easily even without looking at the intro or help; you can dive into a new presentation fairly competently. It is worth looking at the help and online resources to get the most out of it, but even taking Prezi in isolation, it's very usable. Before Prezi, there was PowerPoint, and to a large extent, that was it. PowerPoint is a great piece of software, don't get us wrong, but there was definitely room for a change. Prezi feels fresh and easy, but still produces nice looking presentations. It's also capable of dealing with feature rich and complex material and making it look good.

Social Bookmarking

Bookmarking is the simple process of saving the address of a website in the favorite folder of your web browser so that you can find it again later. Social bookmarking takes these process two steps further. Firstly, instead of saving the bookmarks to your favorite folder, it saves them online. The great advantage of this is that you can then access them from any computer, not just the one you saved them on, simply by logging into your social bookmarking account. This enables you to access your favorite sites from wherever you are, rather than wherever you bookmarked the site. The second advantage is the social part. Saving bookmarks online enables you to easily share them with other internet users and for you to access their bookmarks as well. This can help you find and access many more useful websites; especially as many social bookmarking sites enable you to join special interest groups and finds people who have similar interests to you. The benefits of social bookmarking are that it is easy to share and manage social bookmarks. Searching and storing in database is also easy.

Podcast in Classroom

Podcasts are serial recordings, posted regularly online. Basically, producing podcasts is the technology based equivalent of oral lectures. Much as lectures and news have been shared with listeners, who download the files online. The advantages of podcast are its flexibility, reusability of your lecture. It is advantage for the hearing impaired students.

Screen cast

Screen casts have emerged as a prominent teaching tool on the Internet. Screen casts are an effective way to share ideas, deliver content, and obtain student feedback. Screen casts can be used for describing a step-by-step process, explaining a particular concept, or presenting a PowerPoint presentation with narration and multimedia elements. A screen cast can be used in any class as a part of real time instruction or as the lesson itself as in the flipped teaching model. With the flipped teaching method, instructors use screen cast videos to deliver their lectures, assigning them as homework. Then, in class, students can ask questions as they work through problems that they normally would have done at home without teacher help. Creating an educational screen cast that meets content objectives requires a systematic approach to planning. It seems clear that screen casting is a powerful, highly effective, and affordable learning tool that can facilitate learning across any curriculum area. Screen casting is a remarkable instructional tool. These are the free software's available for instructors which teach and saves time. Jing, Screen jelly, screen, Screen cast are some of the freebies available. Social media in to education A social media where individuals are in communities that share ideas and interests. Some popular communities are: Face book, MySpace, YouTube, blogs, Twitter and delicious. Face book and other social media have been hailed as delivering the promise of new, socially engaged educational experiences for students in undergraduate, self-directed, and other educational sectors. Concerns of social media Concerns: Loss of control, Time commitment, unnecessary information, Information overload anyone can create official account for your university

Pooling to Keep Students Engaged

Polling can be used as a means of reflection in generating an issue for Science experiments, Discipline, Understanding and feedback. Using polling and smart phones to keep students engaged .

Smart Boards

Smart products bring learning to life, helping students experience a deeper level of engagement and understanding by making course content interactive and visual. The ease of use built in to each product enhances instructional efficiency. Instructors can begin delivering course material with the simple touch of a finger or a pen, save comments and notes made in digital ink, and distribute saved content directly to students. Smart products are flexible, complementary and evolving. This means the products you choose today will work together now and in the future as your technology requirements change. Smart board Interactive Whiteboard: Transform your learning spaces into interactive, collaborative environments where students are both inspired and focused. With a SMART Board interactive whiteboard, instructors can interact with dynamic multimedia content and write notes in digital ink, then save them instantly and distribute this material to students with ease. SMART Board interactive whiteboards make learning a visual, engaging experience for students, which helps deepen understanding and promote retention of course material.

Moodle

It is Open source system to help design your session. Moodle is Virtual Learning Environment which provides staff and students with access to electronic teaching and learning materials such as lecture notes and links to useful websites and activities such as discussion forums, group it is something that lets you capture your experience, note, website and photos. Ever note is also a great tool for teachers and students to organize all of their own content. One can download the application. They can organize all of their notes and handouts in an Ever note notebook it is portable, searchable, and indestructible. Even if you they lose their phone, their data is safe in the Cloud. In addition to systematizing notes for class, it's a great tool to use for research activities students can store images, PDFs, and even hand written notes.

Many Teaching Options

1. Chat rooms
2. Discussions board
3. Webinars
4. Emails
5. Social media in class rooms
6. Image creators
7. Conclusion

Any teaching method without destroying the objective could be considered as innovative methods of teaching. There searchers believe that the core objective of teaching is passing on the information or knowledge to the minds of the students. There are a number of ways that teachers can bypass the system and offer students the tools and experiences that spur an innovative mindset. Education is a light that shows the mankind the right direction to surge. The purpose of education is not just making a student literate but adds rationale thinking, knowledgeably and self-sufficiency. When there is a willingness to change, there is hope for progress in any field. Creativity can be developed and Innovative teaching and learning benefits both students and teachers.

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