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Classroom Pedagogical Practices Incorporating Web-Based Activities

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Abstract

Written communication has moved from a private to a public realm thanks to the internet. We are seeing the advantages of being encouraged to develop ideas and arguments in front of others. Shifting writing from private to public areas will benefit the transmission of human knowledge in the long run. Over the last few decades, web-based learning has evolved dramatically. Whereas in the past, teachers would focus on integrating one internet activity into the classroom, today we have a plethora of web-based lessons, projects, and entire courses that teachers are producing and/or finding and integrating into their classrooms. Web-based activities offer a lot of promise to improve learning, but they can take a long time to develop and deploy, and they're challenging to design in a way that has a big influence on students' learning. Technology is used as a complement to the primary course material in both classes and labs, as well as outside the classroom without the presence of the teacher. Onsite technology use refers to learning that takes place in a teacher-led, whole-group environment in a classroom or computer lab. Technology-based activities are typically used as a complement to the core curriculum and are completed during regular class meetings. Software, computer mediated communication, in which learners in a programme communicate online among themselves or with learners in other programmes and contexts, and web-based learning are all technologies that lend themselves to blended learning. The purpose of this paper is to show how teachers might use web-based activities to confirm their relative advantages.

Keywords: Web-based activities, pedagogical practices, classroom teaching

Introduction

The way we learn is rapidly changing thanks to advances in information and communication technology (ICT). The explosion of possibilities for easy and quick ways to create and share content has resulted from the Internet's expansion as a platform. Several technology-based projects aiming at strengthening human capital have occurred in the recent decade, resulting in a tremendous revolution in the field of education and training. It has had a direct impact on business results in corporate training by increasing staff productivity and improving performance. It has resulted in a broader reach and creative techniques in education for inclusive development in academic learning and vocational training.

E-learning is being investigated, adopted, and debated in India as a means of meeting the growing need for high-quality higher education and job training. Learning is no longer limited to traditional classrooms; with enhanced Internet connectivity and bandwidth, there are an abundance of materials on the Web that are easily accessible. E-learning provides a wealth of alternatives for designing, developing, and delivering learning solutions that are unique and traverse geographical boundaries.

All people interested in the impact of emerging digital technologies on teaching and learning should read Teaching and Learning in the Digital Age. It investigates the concept of the digital era, as well as knowledge, pedagogy, and practise perspectives in a digital setting. It intends to both develop thinking and offer solutions for educating technology-savvy students that will enable meaningful learning experiences by studying teaching with digital

devices through new learning theories cognizant of the digital age.

The intentional use of networked information and communications technology in teaching and learning is known as e-learning. This technique of teaching and learning is also referred to by a variety of different labels. Online learning, virtual learning, distributed learning, network-based learning, and web-based learning are some of them. They all refer to educational methods that use information and communication technology to mediate both asynchronous and synchronous activities. However, closer examination reveals that these labels pertain to slightly different educational processes and thus cannot be used interchangeably with the word e-learning. A major feature of information and resources delivered at a time, place, and speed that is appropriate and convenient for individual students rather than teachers and/or educational institutions.

The necessity to cater to an expanding number of institutions in India is the primary motivator for employing e-learning in the academic sphere in India.

Key drivers

The following are the key drivers for seeking support from e-learning in the context of higher education:

Quality improvement: It can provide additional content to enhance the quality of the prescribed course materials in the form of audio, video and animation. This can also complement the teacher's knowledge and skills in explaining particular topics and making available the latest updates on the subject, especially when there is a dearth of trained teachers.

Extended learning opportunities: It can be used to reduce the disparity between urban and rural educational institutions by reaching remote locations, by overcoming physical barriers like the lack of good roads, transport or other forms of infrastructure. Besides providing quality content, e-learning addresses the need to attract drop-outs and those who cannot afford to attend regular colleges.

Research activities: Analytical studies and surveys form an integral part of the teaching and learning process. The internet can be used for this purpose as it is repository of information and research tools, and it simplifies the process of content publishing and enhances the scope for collaborative research activities.

Innovative teaching and training: Learning can become more interesting and engaging when lectures and routine classroom processes are complemented by new methods of acquiring knowledge and skills. Active learner participation is essential to creating an engaging learning experience. Teacher training and new teaching methods could look at innovative ways of facilitating learning; it should not depend only on the prescribed books.

Pedagogies and advancements in the twenty-first century.

The internet and other web-based technology have made knowledge accessible to practically everyone who can afford basic ICT equipment, such as an internet-connected computer or mobile device. As a result, learning is no longer limited to specific environments or social groupings. MOOCs are one of the most recent breakthroughs in distance education programmes.

Previous research has stressed the importance of pedagogies that empower students to identify their own learning needs and, as a result, participate in the planning of their own education (Black & William, 2009, Webb & Jones, 2009). There is also a need for a teaching culture that goes beyond learning facilitation and encourages teachers to explore and develop in their use of online learning technology in their classrooms (Laurillard, 2012). This type of collaboration allows professors and students to collaborate and come up with their own ideas about knowledge and meaning (Laurillard, 2008; Palloff & Pratt, 2010). It is the set of lifelong talents that learners and knowledge workers require in order to handle difficult problems and generate new knowledge in today's world (Hakkinen & Hamalainen, 2012). The introduction of increased focus on what has been dubbed "blended learning" in the late twentieth century, where online and some types of additional face-

to-face interaction occur, looks to be developing as the main approach across higher education.

Web-based learning

It has changed greatly over the past decades. Where teachers used to focus on integrating one online activity in the classroom, today we have numerous web-based lessons, projects and complete courses that teachers are developing and/or finding and integrating within their classroom.

Confirming Relative Advantage of Web-based Activities

- Web-based activities have a lot of promise to improve learning, but they can take a long time to develop and deploy, and they're hard to design in a way that has a significant, positive influence on students' learning (Chen, Lambert & Guidry, 2010; Coulter, Feldman & Konald, 2000; Hannafin & Hannafin, 2010). Coulter et al.,(2010) advise teachers considering web-based activities to ask themselves a series of questions before committing to a project. These questions can be used by teachers to confirm the relative advantage of online activities over alternative ways for accomplishing the same goals. The questions below are based on those proposed by Coulter et al. (2000) and can be used to create an integration plan for any type of web-based learning activity:
- What is the curriculum-related purpose of the activity? Using the Internet should not be thought of as an end in itself; the activity should accomplish some objective or purpose in the required school curriculum.
- Does the Internet enhance the activity? The rule of thumb is that if the activity could be done well without the Internet, it probably should be.
- How will students use online resources (as opposed to just locating them)? The object of the activity should be for students to do something with what they locate on the internet. Once they locate information, they should be asked to determine its meaning, compile and synthesize various sources, or critique its usefulness.
- Do students have the necessary information analysis/information synthesis skills, or I am including these in the instruction? To make sure the project doesn't become an "information locating" exercise, it should call for additional, higher-level tasks after the students find the information. However, teachers must be sure their students have the prerequisite skills to do these higher-level tasks.
- Do I have the necessary time and support for the activity? Make sure it is understood that online activities normally take much longer than first thought. Teachers many times do not allow sufficient time for students to complete activities-both in terms of support needed for students to be successful with the activity and the actual time students will be working with the project. Teachers must make sure they have the technical support to resolve these problems in an efficient way so as not to slow down the momentum of the project.

A framework for web-based activities

Doering, Hughes and Scharber (2007) provided a framework consisting of four types of web-based learning activities that show how teachers may employ online resources. The four types are:

1. Individual lesson plans. The majority of online educational resources are individual lesson plans that teachers download and integrate within their classroom, often without adaptation.
2. Online lesson enhancements. The most popular approach to using web-based learning activities is through what Doering, Hughes and Scharber called lesson enhancements. Lesson enhancements are when teachers identify an online enhancement that augments their curricular goals and use it to extend and deepen their student's understanding. An example of an online lesson enhancement is when a teacher wishes to teach frog dissection and uses an online

simulation, the teacher also uses a social networking tool such as wiki, blog or discussion board to promote collaboration. Another example is when, during a lesson on plate tectonics, teachers have students use Google earth to note the number, location and magnitude of earthquakes around the world in the past 24 hours.

3. Completely online courses and curriculum. Allen and Seamen (2009) noted in their recent survey that 70% of responding school districts offered completely online courses. These courses range from those that are designed and developed from major online institutions, such as Florida Virtual School, to individual courses delivered in your traditional brick and mortar schools. These courses provide opportunity to students by allowing them to enroll in subjects that are not available in their face-to-face traditional school, or enroll completely in an online degree-granting institution.
4. All-inclusive online courses, curriculum and online learning environment. These are also online learning environments that provide the entire earlier noted features-online curriculum, enhancements, courses and learning environments. Numerous sites today are developed to give teachers the flexibility of choosing and adapting the resources as needed. Thus, if they wish to teach an entire course with the learning environment, they are able to accomplish this. If, however, they wish to use online simulation to augment and enhance their existing curricula, they are also able to accomplish this. An example of this type of learning environment is The JASON Project.

Integration Strategies for Web-Based Activities

Web-based projects are so rich in resources and learning possibilities that each one can usually be used with more than one of the integration strategies.

Support for student research

Students frequently use websites and web-based video resources and videoconferencing to gain insights into topics they are studying and to locate information for research papers and presentations. This work may be in the form of individual or group based research projects or electronic mentoring.

Strategies in which students write for distance audiences help motivate them to write more and to do their best writing. Activities might include forming keypals and electronic publishing.

Practice for information literacy skills

Locating and using information from Internet sources has become a key part of classroom learning. It is important that students have opportunities to learn how to use web resources efficiently and effectively. Possible activities include individual and cooperative research projects.

Visual learning problems and solutions

Many sites provide access to data, images, animations and videos that help students understand complex problems and guide them in creating their solutions. Possible activities include individual and cooperative research projects, as well as problem based learning projects.

Development of collaboration skills

Web-based projects provide rich opportunities for students to learn how to work together to solve problems. Many web-based projects call for students to produce a product, such as a brochure, web page, or multimedia presentation. McGrath (2004) describe ways to help make these collaborative projects most productivity. Projects that promote collaboration skills include individual and cooperative research projects, electronic publishing, and group development of products, problem-based learning and social action projects.

Multicultural experiences

Many web-based projects focus on broadening student’s perspectives in their own and other cultures and providing insights into

how their culture relates to others in the world. Appropriate web-based activities include electronic (virtual) field trips and social action projects.

Web-based Programs

Web-based programs are those that would fall into the category of completely online courses and curriculum. These are projects that allow educators to teach an entire unit on a certain topic through an online experience. Although these are not as common as individual lesson plans, they are many times more valuable to educators. Examples of these web-based projects are Adventure learning projects; Discovery Channel's educational portal; and Geo Thentic, a program designed for students to learn about science, social studies and technology.

Web-Based Lessons

There are both benefits and drawbacks to the lessons you can locate on the Internet. The lessons are plentiful, but finding the perfect one for your classroom may be a challenge. With organizations and companies like National geographic and Verizon stepping into the educational arena, the quality is only getting better. For example, the National Geographic Society has released their new education site entitled National Geographic Education (http://education.nationalgeographic.com). Verizon has launched Thinkfinity (http://www.thinkfinity.org) that provides lessons for classroom, at home and after school as well as professional development activities. Other sites for lesson plans include:

- **Internet4classrooms:** http://internet4classrooms.com/integ_tech_lessons.htm
- **Discovery Education:** http://school.discoveryeducation.com/lessonplans/tech.html

For those educators who want to design their own web-based lessons, the **webquest** model (http://www.webquest.org) is a good choice. The model, which was developed by Bernie Dodge (1995) at San Diego State University in 1995, has become a staple for allowing users to develop their own web-based lessons. There are many resources that scaffold the designer through the necessary steps.

A webquest comprises a set of explicit principles. A webquest is based on an authentic task that adults complete in a society; uses higher level thinking skills; and also makes use of authentic data on the Internet. A webquest is not a research report or simply an experience that takes place on the web.

Conclusion

While the advent of online learning has been an exciting development for many in the education sector, from schools to higher education, and has been adopted in training, business, and workplaces, the promise or potential has been discussed for much of the second half of the twentieth century rather than clear demonstration of educational applications and productivity impacts of adoption.

In the twenty-first century, it is more important to closely monitor, investigate, and demonstrate that online learning is a superior option for students, and that the many purported benefits outweigh the numerous drawbacks. Online learning has the potential to provide new insights into learners and their learning, as well as to adopt new pedagogies to enhance and develop learner-managed learning to the point where it produces real improvements, rather than simply wallow in the potential excitement that technology can bring in the first place.

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