Three Pedagogical C’s of Internet Learning Communities

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Abstract

On today’s Knowledge Age fast track, the only constant change seems to be change itself. This paper presents and discusses how learning communities on the Internet can provide enriching creative, cognitive and collaborative learning environments for exploring knowledge and solving problems. Specific examples are also given of simulated environments for practicing transferable skills and WWW-based learning resources and tools, which are currently being used in Singapore. The conclusion is that the three C’s of creativity, cognition and collaboration are especially important aspects of teaching and learning pedagogies in today’s global village.

Introduction

The work of Lev Vygotsky, a theorist and researcher in the 1920’s and early 1930’s whose developmental theories on the role of cultural learning and schooling have significantly influenced education today, provides a research base for this paper. Vygotsky’s principal premise was that human beings are products of their human cultures as well as of biology. Moreover, intellectual functioning is the product of social history; and language is the key mode by which cultures are learned and through which verbal thinking is organized and actions are regulated. People learn such higher functioning from interacting with others around them. There is also a need for creative, cognitive and collaborative communications.

Creative

First, creatively, there is a need to align technology with instructional goals by integrating the World Wide Web into teaching and learning practices. Three levels of difficulties and stages need to be addressed. The first stage involves linking learning to the world of work and moving from using knowledge in one discipline to applying knowledge within disciplines. The second stage deals with applying knowledge between disciplines to real world, predictable problems. Finally, the third stage involves applying knowledge to real world, unpredictable problems.

A model, which is currently being used in Singapore, exemplifies the concepts discussed in this paper. In this example, process skills are effectively woven into subject content, enabling both to be concurrently internalized. Additionally, related WWW lessons and activities have been designed and can be supplemented, transferred and tailored to fit individual learning environments. Learners can, therefore, have access to a plethora of information, including investigative research, and be provided with a virtual environment that effectively mimics real world conditions.

Cognitive

Secondly, the paradigm shift, which is occurring in many educational systems throughout the world today, compels educators to prepare students to be net savvy and info savvy individuals who are able to function effectively in cognitive areas by using the 5 A’s of: (1) Asking key questions, (2) Accessing relevant information, (3) Analyzing acquired information, (4) Applying information to tasks and (5) Assessing processes and results.

Moreover, in addition to the positive impact of learning through using computers in traditional ways for drill and practice and tutorial instruction, a greater potential exists for engaging learners in problem-solving activities and higher order thinking (HOT) skills. These HOT skills require manipulation of ideas and information in ways that change implications and meaning. Learners can thus use WWW-based learning resources and tools to discover rewarding, new meanings and solve problems through such processes as combining ideas and facts to hypothesize, generalize, synthesize, explain and arrive at interpretations or conclusions.

To further develop cognitive abilities, the Internet can also be used to help students examine and learn from authentic, real-life situations in their content areas. To enhance the development of thinking skills, educators need to provide a plethora of application opportunities during lessons and assignments.
horizons but also simultaneously helps to develop multiple perspectives.

Examples of these processes include activities from web-based lessons currently being used in Singapore, which have been designed to encourage learners to explore various conditions associated with heart diseases and to relate these findings to the importance of having a healthy lifestyle. Such activities enable learners to go beyond the written objectives by exploring real life situations. Students can also learn more about the importance of circulatory system functions and have opportunities to role-play. For example, they can imagine that they are nutritionists who create a special diet program to be marketed to investors.

Collaborative

Thirdly, proponents argue that collaborative learning in schools provides opportunities for students in large classes to interact on a smaller scale and prepares students for the “real world.” Effective, collaborative communications are also essential components of successful learning processes; and because “. . . no one knows it all; collaborative learning is not just nice, but (also) necessary . . . ” [1]. The predominant philosophical underpinnings of collaboration are for teachers to use a “coach approach” and function as a “guide on the side” as opposed to being a “sage on stage.”

The website http://studyhit.tripod.com/studyhit1.htm was created in Singapore in October 2000 to provide topic links as well as sample lesson plans to help teachers plan web-based lessons. This website is constantly being updated. In February 2001, 56 students at Canberra Secondary School in Singapore, who were taught using web-based lessons, were surveyed.

Results revealed that all of these students preferred WWW-based lessons more than traditional chalk and talk. Questions asked included whether websites were useful for online instruction, quizzes, self check work, e-conferencing, discussion forums and projects. Respondents reported that they found the web-based lessons to be stimulating and that their levels of concentration on the concepts presented were definitely increased because of the learning resources and tools, which were used. They also commented that they enjoyed these educational experiences and wanted to have more, which were similar.

Ongoing surveys are also being conducted at Canberra Secondary School at individual levels, each of which has 320 students, who are divided into express, normal academic and normal technical streams. Findings can be used to tailor-make lessons based on student preferences.

Conclusion

In conclusion, learning communities on the Internet can effectively implement pedagogical paradigm shifts by using creative, cognitive and collaborative teaching and learning strategies.

References


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