



THE ROLE OF KNOWLEDGE CONSTRUCTION, WEB-EFFICACY, SELF- REGULATION AND COLLABORATIVE INTERACTION IN WEB-BASED LEARNING ENVIRONMENTS (WBLE'S)

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ABSTRACT

Collaboration is an important ingredient in any learning process. however, every interaction does not lead to increased learning. When interaction has a direct influence on learner's intellectual growth, we can say the interaction is meaningful. The accurate meaning of meaningful interaction is strongly related to the learning theories underlying the development of particular learning environments. The major goal of this Article is to gives web based interaction in terms of meaningful learning based on the learning theory known as social constructivism A secondary goal of this paper is to present the implications of meaningful online interaction. This paper explores about developing the process of web efficacy, knowledge construction and self-regulation in WBLEs for learners . The purposes of this paper is to review and analyse the WBLEs from the perspective of social learning theory and to give notions about how students can learn flexibly in WBLEs and to discuss about the learner knowledge construction in different websites, self-regulating in learning, Assessing about their own learning through different specific websites when it provide collaborative work for learner for discussion sharing their views on some specific content in the web based learning environment.

Key words: Social learning theory, Knowledge construction, web-Efficacy, Self-Regulation, collaborative activities.

INTRODUCTION

The advancement of information media and the convenience of the Internet have fostered the growth of web based instruction, interactive functions, and resources available for learners to engage in interaction, learning, discussion, and access without time and geographic constraints. applying constructs from social learning theories in WBLES a social learning perspective, knowledge is constructed while individuals are engaging in activities, receiving feedback, and participating in other forms of human interaction in public, social contexts Because cognition is not considered an individual process, learning and knowing are shaped by the

kinds of interactions a student has with others, and the context within which these interactions occur. The role of interactions has been widely studied in online learning and is considered central to a successful learning experience. For a student, these interactions may be with other students, instructors, or the content. Further, the length of these interactions may be short and brief or long and sustained (Biesenbach, 2003). The integration of tools and resources to support interaction within WBLEs has received substantial helpfulness. Does technology enhance actual student learning? Research indicates that students discern greater social interaction when creating and sharing in-depth online analysed online discussions conducted using a “starter-wrapper” technique in a graduate-level educational psychology course, where every student served at least once as “starter,” who initiated weekly discussion by asking questions related to the readings, and once as “wrapper,” who summarized the weekly discussion. Moreover, student comments reflected both their experiences and self-awareness. Online conference activity graphs further revealed that student comments became more interactive over time. Consistent with social learning approaches, learners will both be encouraged to engage in social discourse and supported in their efforts. Results also indicated that individual learners were often dependent on the directions of the discussion starter, reinforcing the importance of shared experiences in a WBLEs. Another characteristic of social learning theories is that of modelling. A model is a pattern or example that is provided to a student to illustrate how one might behave. The expectation is that observing the model will impact the student's perceptions and understandings about the Research. It is also beginning to provide evidence of this in online environments. Like ADDIE model use to how to reflectively interact with others in WBLEs the class engages in the learning more effectively.

Knowledge Construction

Knowledge construction is a collaborative process which aims to produce new understanding or knowledge which exceeds something that anyone alone could not achieve. It is also essential that knowledge construction is based on each others' ideas and thoughts. Learners engage in distributed cognition. Students work together to share ideas and draw conclusions or develop solutions.

There are many positives associated with distributed cognition, including:

- Greater understanding and increased use of elaboration
- Exposure to others' ideas and greater respect for diversity
- Identification of flaws and inconsistencies in thinking
- Higher-level thinking
- More effective interpersonal skills.
- Activating Knowledge

Process of Knowledge Construction

The knowledge construction process relates to the extent to which students understand, investigate, and determine how the implicit cultural assumptions, frames of situations, outlooks, and preconceptions within a restraint influence the ways in which knowledge is constructed within it.

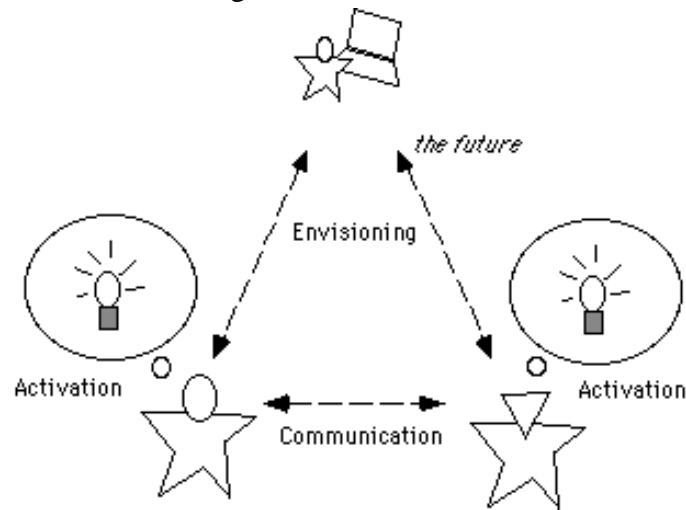


Fig: 1 Process of Knowledge Construction

1. Activation:

The knowledge relevant to system design is often distributed across people, organizations and artifacts. Activating knowledge means to make it categorical and easily reached to all participants. Both users and developers benefit from "activation." For developers, activating knowledge is crucial to gain an understanding of the problem to be solved. For users, activating knowledge can mean to see the familiar aspects of their practice in new ways. The problem activation addresses is that experts know more than they can say. Suchman(1987) describes such practical knowledge as "not a mental state but something outside of our heads that, precisely because it is non-problematically there, we do not need to think about" In Constructivism, knowledge is constructed, and the significance of the knowledge lies in the learner's integration of new ideas with past knowledge and experience, thus giving the phenomenon meaning and constructing his understanding about knowledge. This process of knowledge building is known as "meaningful learning".

2. Communication

The second key knowledge construction process is communication. A common notion of communication assumes that knowledge is transmitted from one person to another. This notion seems to hold in simple communication, such as that between people who share a common background. But when we think of the difficulties in communicating with someone from a different background from our own. Communication is defined here as the creation of shared understanding through interaction among people. This definition implies that communication is a social activity and not simply a transmission of information from one person to another. The understanding created through communication can never be absolute or complete, but instead is an

interactive and on going process in which common ground, i.e., assumed mutual beliefs and mutual knowledge, is accumulated and

3. Envisioning

Envisioning is the third key knowledge construction process. To envision is to understand how the current practice will or could be changed by new computer support the possibilities and implications of new relationships between tools, tasks and information. Envisioning is a constructive process in the sense that it is based on prior understandings but extends toward the future. It is therefore different from activation because it builds new understandings, rather than surfacing existing ones. Envisioning is a creative process, but it is not without bounds. Constraints on the possibilities for transcending the existing tradition of a work practice come from the work organization, the limits of technology, project budgets, and so forth. Visions at some point have to be tested against reality to avoid envisioning what is not possible. Another challenge to envisioning is the fact that the future is a moving target. Users are not passive receivers of technology, but instead are themselves designers, who use and adapt technology to their own needs. Therefore, it is important that visions of the future are not regarded as static goals to be attained, but rather as the starting point for continual change and adaptation. Learning is still pre-determined by instructional sequences and in a push manner. Students, therefore, are constrained to apply their prior knowledge to generate their mental models and to conceptualise various parts of information to form a whole within a given context. Students often find themselves in various situation and carry out multiple learning activities, which are hardly supported by the current course structure. Most computer assisted learning provides with customisation and personalisation mechanisms, but little methodological guidance is provided for instructors to introduce the functions of the social negotiation on individual learning goals, learning content and learning methods into the courseware. The knowledge construction process relates to the extent to which teachers help students to understand, investigate, and determine how the implicit cultural assumptions, frames of references, perspectives, and biases within a discipline influence the ways in which knowledge is constructed within it.

Web-Efficacy

With the growing reliance on computerized systems and increasing rapidity of the introduction of new technologies, user acceptance of technology continues to be an important issue. Drawing upon recent findings in information systems, human computer interaction, and social psychology, (Bandura, A. 1993) self-efficacy in cognitive development and functioning. self-efficacy reflects the confidence learners report in approaching and handling new tasks. From a social learning perspective, web-efficacy is context-dependent, associated with learning through different web and surfing the websites. Research indicates that web-efficacy influences the possibility of engaging with a task or instruction through the web and. In a qualitative study of adult learners' self-directed learning in online environments, found that learners who were comfortable with online technologies reported less anxiety associated with learning via WBLEs, and they engaged more actively in

bulletin board and chat discussions. Once learners become familiar with the distance learning technology, they tend to become less anxious and less frustrated. Improving online learning: Student perceptions of useful and challenging characteristics, thus increasing the likelihood of individual learning as well as support for the larger community. A well organized and intuitive web-based learning platform enables students to focus on the work. An interactive and engaging web-learning platform is using the various multimedia resources that are available today. In our technological age, we have access to instant streaming video, crystal clear recording capabilities and instant chat support services. And can rely upon an innumerable of highly interactive multimedia production tools, such as design software and high definition cameras to record informative courses for the students.

Factors of web efficacy

Motivation

Motivation is categorized as being either intrinsic or extrinsic to the learner. Intrinsic motivation refers to behaviours that are engaged in for personal interest or desire for mastery, whereas extrinsic motivation refers to behaviours that are performed for externally prized consequences (Shen, 2006). Consistent with social learning perspectives, we examined how different types of motivation affected learners' online learning and learning application. Learning in different websites gives intrinsic motivation to the learner and can get enormous information about various websites, learner self-motivated to learn here learner will be free to express their views, Discuss, and also to share the knowledge.

Web-Browsing

A web browser is a program on computer that allow to access websites on the internet. The web is written in a computer language called HTML (Hyper Text Mark up Language). Browsers translate this so that we can read it easily. There are many browsers available. It is defined as going through or searching for specific information on a specific website. Sometimes it is necessary to understand what is going on the browser side to verify if what the user is seeing is the same as he is expected to see after certain interactions. These are specific searches on the internet track multiple web page visits in one day, one week, etc. To track how much time someone spends on a web page so can come to know that how much a learner had spent a time over one web page and also it is important to view that learner has given importance to one particular website or the other different websites has browse for specific learning.

Self-Regulation

Self-regulation encompasses a range of learners' individual characteristics. It is associated with an individual's self-efficacy, motivation, and metacognitive skills in utilizing available resources. The majority of the results indicate that all of the components play an important role in students' learning experience in WBLEs. The question largely unanswered is how to help students develop self-regulation skills in WBLEs. Some studies have explored or suggested strategies for promoting students' self-efficacy, such as providing technological orientation and factors influencing students' motivation in WBLEs. Little is known about how to help students

develop metacognitive skills in utilizing available resources in WBLEs. What we do know is that making resources available self-regulated student intentionally exerts effort toward managing and directing complicated learning activities. According to Steffens, 2006 Self-regulation in learning is critically related to learning effectiveness and high-achieving students are typically highly self-regulated in their approach to learning.

The performance phase involves self-control and self-observation. Self-control refers to the use of specific strategies such as self-talk and self-instruction. Self-observation includes self-monitoring, time-management and study skills. Johnson (2004) identifies that Self-judgement and self-reaction from the third phase, reflection Self-judgment involves self-evaluation, which is the comparison of observed performance against a standard, and perceptions of the reasons for success and failure. Self-reaction refers to the individual views of performance and can be either defensive or adaptive. With respect to SRL, defensive reactions include withdrawing or avoiding opportunities to learn. adaptive reactions include changing learning strategies or behaviours to increase the effectiveness of goal-directed behaviour (Lefrancois, 1982). Students who develop plans and strategies to achieve personal learning goals are actively involved in their learning. Web-based technology is particularly well suited to promoting active student involvement in the processes of learning. According to (Yu, 201) the many advantages of network technology (e.g., place, time, device and platform-independence, immense storage space, multimedia capabilities, high processing speeds, and instant data retrieval and management) enable the design and development of web-based student question generation learning systems.

Collaborative Interaction

Online discussions make it much easier for students who are quiet or reflective to participate. A kind of interaction that allow people to work together in the resolution of a problem or act together in the same software application (Janette et.al. 2009). There have been optimistic views that any web based interaction can be educationally valuable. However, online learning environments do not, as such, guarantee that learners will achieve genuine collaboration. When engaging students in projects that require them to work within a group setting (completing a task or participating in discussion), learning becomes an avenue to academic and social transformation facilitated by an instructor, but ultimately controlled by the students. Collaboration among students and teachers also works to cement a student's interest and expand his/her knowledge of a specific topic. By giving their students choices in how to approach a real world problem together. By working in collaboration with their communities, students are able to apply their knowledge to the world around them. Connectivism (Siemens, 2005) recognizes that in the online learning environment, seeking and constructing knowledge is most often accomplished through interaction and dialogue. (Swan, 2006) Facilitate learner readiness for group work and provide scaffolding to build skills, Nurture the establishment of learner relationships and sense of community Monitor group activities actively and closely During the collaborative process, the instructor needs to be available for feedback, general information, and private counsel. In addition, the instructor needs to intervene as required to keep discussions on track, support and animate dynamic conversation, help students stay focused on the task, assist with relationship building, and provide reassurance.

Conclusion

In online learning Web based learning platforms the learner can develop comprehensively knowledge ,web efficacy, learning collaboratively in web and self -regulating towards learning. WBLE'S Plays a vital role in the construction of innumerable information accessible in websites which gives connectivity for the learner to learn more on specific one. WBLE'S afford learner to think differently and to learn this involves self-control and self -observation, self-time management and self- monitoring while learning.it makes the way for the learner to learn with their own pace and aptitude to learn, it support the students to keep in one track of learning making Discussion with the experts ,giving their opinion on some thought asking for response could be possible. It facilitates the learner readiness for group work and provide scaffolding to build skills. . Learning in different websites gives inherent motivation to the learner and can get massive information about a number of websites, learner self- motivated to learn here and will be free to express their views, Discuss, and also to share the knowledge, thus increasing the likelihood of individual learning as well as support for the larger community.

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