ISSN – 23490209 Volume – 5 / Issue – 1 APRIL 2017

CONSTRUCTIVISM AND MULTIMEDIA: TOOLS OF INNOVATIVE TEACHING

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Abstract

Multimedia plays significant role in innovative Teaching methods. The teaching methods based on constructivism with multimedia produce logical mental construct from the various perspectives such as the presentation of words, pictures, and auditory information. They are not processed at the cognitive level in a mutually exclusive fashion; rather, these elements select and organize dynamically to produce logical mental construct of the learner. Multimedia helps the learners to understand a scientific explanation. The constructivist approach enhances the leaning abilities exploring the variety of tools and information resources in the pursuits of learning goals and problem solving activities. Learners construct the innovative meanings within the context of their experiences and social environments. On the other hand, multimedia helps the learner to present to present text, graphics, video, animation, and sound in an integrated way and its ability to facilitate collaboration across the globe provides an effective means of both creating and enhancing a constructivist learning environment. Constructivism provides valuable insight for educators who want to use multimedia to amplify student learning outcomes. The use of multimedia in constructivist classrooms enables students to be more conscientious for and active in the learning process, which contributes to an increase in learning outcomes. The use of multimedia and constructivism makes a fertile ground for the persuasive benefits in innovative learning outcomes.

Keywords: *Multimedia, Constructivism, Innovative leaning abilities.*

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Constructivism has stepped out towards evaluating how the student structures and processes that knowledge rather than how much is learned in the traditional mode. It mainly focuses on the learning process rather than on the content, learning 'how to learn' rather than 'how much is learned'. The learning abilities of the students can be developed through the various skills like problem solving, critical thinking, team-oriented experiences, experimental and interdisciplinary knowledge by using multimedia as the tolls of learning process. It is quite different than the traditional way of learning. It also promotes the active participation of the learner in the learning process. In the traditional classrooms, students have to rely on the information given by their teachers, who supposed to be the sole and authentic source of the knowledge but constructivism elaborates the learning process student-centered by which they could learn by their own experiences. They start to construct their own knowledge through their own outcomes.

Constructivism differs from the traditional classrooms. It offers an authentic activity of the constructivist in the context to learning process. It emphasizes on the experiences through learning that promotes the personal relevance. Brooks & Brooks (1993) elaborate the distinction of constructivist classrooms and traditional classrooms as follows.

Constructivist Classroom	Traditional Classroom
Students Collaborate on Tasks	Students Primarily Work alone
Student input is highly valued in the teaching – learning process.	Adherence to the established curriculum is highly valued.
Students are treated as thinkers with the ability to construct new knowledge	Students are treated as empty vessels into which information is poured by the teacher
Teachers partner with students in the classroom	Teachers are the experts, disseminating information to students
Teachers seek students' feedback in order to better understand and student learning	Teachers seek the "correct" answer to validate student learning
Assessment of student learning is integral to the teaching-learning process	Assessment of student learning is separate from teaching

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It appears from the above analysis that the student-centered learning through constructivism promotes the integrated values through the participation of the students in learning process. Vygotsky points it out that‘ knowledge is constructed by learners as they attempt to make sense of their experiences’ (Robinson et al., 2008:33). The cognitive part of the traditional classrooms is replaced with multiple aspects of learning through self-awareness. The use of multimedia enhances the structure of knowledge. The constructivist classrooms foster the role of a student as an active constructer rather than a listener. The teacher in the context becomes a companion of a student to discover the innovative things through learning process. Teaching and learning practices allow freedom to the constructor to meet the individual differences. It also helps the learners to construct their own knowledge which enables them to come up with innovative ideas. It removes the barrier between what they know and what they are expected to learn. In constructivist learning, students construct their own knowledge and there is a purposeful nature to designing learning activities.

The role of the teacher in the traditional classrooms is restricted to the curriculum designed about the contents and the students are supposed to use the instructional material such as notes, diagrams and models. The use of multimedia as a tool of innovative teaching provides the platform to use the updated technology such as text, graphics, sound, video and animations, instructional systems, and computer based support systems. Multimedia is a sound option for traditional teaching. It makes the students to explore and learn at different paces, every student has the prospect to learn at his or her bursting talent.

The use of multimedia provides the platform to use a variety of pedagogies. As an innovative tool, it can support didactic or facilitative approaches, collaboration and interaction across time and distance, enquiry or interrogation, open or closed research, lock step or mind-map. The constructivist approach can be developed by online technology supports. The capacity of multimedia to deliver information or to communicate with a mass of students in quite individual ways opens up the possibility of tailoring innovative teaching as a the need of the students in time and place without the limitations imposed by peer groups.

The use of multimedia in teaching process will keep the teachers vibrant about their lectures more influential rather than the lectures in the traditional way of ‘chalk and talk’

methods. The students could concentrate more than the print texts. The interest among students about learning will also retain in their mind.

Multimedia in teaching-learning mode will have a constructive force on to increase elasticity so that learners can accesses-books, sample examination papers, previous year papers etc. and can also have an easy access to resource persons, mentors, experts, researchers, professionals, and peers-all over the world. It would offer the loaded environment and inspiration for teaching learning process which seems to have a profound impact on the process of learning in education by offering new possibilities for learners and teachers. These possibilities can have an impact on student performance and achievement. The wider use and availability of the best practices and the best course material in education can cultivate better teaching and improved academic achievements of students. On the whole, ICT facilitated education will ultimately lead to the democratization of education.

Multimedia can enhance the quality of education in several ways, by increasing learner motivation and engagement, by facilitating the acquisition of basic skills, and by enhancing teacher training. It has transformational tools which, when used appropriately, can promote the shift to a learner centered environment. ICTs, especially computers and Internet technologies, enable new ways of teaching and learning rather than simply allow teachers and students to do what they have done before in a better way. Multimedia has an impact not only on what students should learn, but it also plays a major role on how the students should learn. It will also help to sustain innovative teaching and learning mode.

The use of multimedia as a tool of innovative teaching will focus on the part of competence-based education rather than content-based formula. It will also step ahead from the 'chalk and talk' method to digital and interactive mode of teaching and learning activities. The performance –based learning will enable to ponder into the avenues forming the platform to deal with the sound effects of constructivist classrooms rather than traditional way of classrooms.

The pedagogical implication of multimedia in constructivism as an innovative tool involves the adoption of general components of information and communication technologies in the teaching learning process. It is a strong means for change among many educational practices. To deduce the educational practices, the use multimedia will ensure the proper assessment with the grip to enrich, strengthen, smooth functioning of teaching learning modes and expected academic performances with the space of the globe through multi-tasking skills.

ISSN – 23490209 Volume – 5 / Issue – 1 APRIL 2017

Richardson (2003) identifies several principles as the premises of the constructivist pedagogy. These principles suggest that the teacher first recognize and respect students' backgrounds beliefs, assumptions, and prior knowledge; provide abundant opportunities for group dialogue aimed at fostering shared understanding of the topic under study; establish a learning environment that encourages students to examine, change, and even challenge their existing beliefs and understandings through meaningful, stimulating, interesting, and relevant instructional tasks; help students develop meta-awareness of their own understandings and learning process; and introduce the formal domain of knowledge or subject matter into the conversation through a sort of loosely structured instruction and the use of technological tools as Web sites.

Computer technology aware the students to construct their own ideas while learning. However, the general uses of multimedia are rarely found in traditional classroom. By the use of technology the students do not only literate the ability to read and write but also to be able to understand music, video, hypertext and networked communications. Multimedia and constructivism expand human potentials which enhance the thought process rather than restricting it up to the basic levels.

Conclusion

Constructivism and Multimedia promote the learning interest of the constructivists in the experimental based learning by applying their own experiences. Constructivism and Multimedia form the platform for positive attitudes and beliefs among constructivists to make learning structure-based. Constructivist theories are of great value to the teachers in their efforts to help students to acquire the substantive and syntactic components of learning. The constructivism in terms of its epistemological, philosophical, and theoretical underpinnings and experimental learning fosters the new avenues in learning process through multimedia as an innovative tool in teaching methods.

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