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Education

THEMATIC BASED DIGITAL COURSEWARE

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ABSTRACT In this paper we consider thematic based digital courseware management systems from a pedagogical perspective, with the goal of aiding educators in effectively utilizing thematic based digital courseware in teaching and learning. The modern world demands a better learning experience that is personalized to individual and delivered on demand in a flexible format.
Thematic based instruction is a newer concept in pedagogy. Thematic based teaching proved to be a powerful instructional method for integrating various concepts in curriculum by daily life examples and experiences. Thematic based instructional strategies tackle real-world scenarios holistically from different subject areas perspective. This method entails a rich learning experience, which is relevant to learner's lives.

KEYWORDS : Thematic instruction, digital courseware, adaptive tools, Pedagogy.

INTRODUCTION:

Digital courseware is one of ICT tools. It is an "instructional content that is compassed and sequent to facilitate delivery of an full program through purpose built software. It includes personalisation of instruction and is equipped for adoption across a range of institutional types and learning environments."

Technology supports thematic learning by providing tools for communication (.e-mail), research (e.g.,world wide web or CD-ROM-based resources), and presentation (e.g.,wordprocessors and multimedia authoring/ presentation tools such as Hyperstudio). The ability of the web based learning to incorporate information, image, animation, interactive problems, quizzes provides variety to maintain students interest.

Since their development eight years ago, the use of electronic courseware has dramatically increased (Angelo, 2004) to the point that it has become an essential feature of instructional technology at institutions of higher education (Warger, 2003).

While electronic courseware is used as much for traditional classroom courses as distance courses (Warger, 2003), it is undeniable that the expansion of e-learning has paralleled the growth of electronic courseware (as electronic courseware is the platform for distance education).

Thematic Based Instruction Proposals

- Subject matter core:- The fundamental organization of the curriculum should be derived from subject matter, rather than from forms, functions or situations.
- Use of authentic texts:- The core materials (texts, video tapes, audio recordings, visual aided) should be selected primarily from those produced for native speakers of language. .
- Learning of new information :- Students should use the native language to learn new information and to evaluate that information ,based on knowledge of their own culture, and their own emerging culture literacy in second culture .
- Appropriate to the specific needs students:- The topics, content, materials, and learning activities should correspond to the students and should be appropriate to the proficiency level of the class.

Adaptive Tools (Adaptive learning)

Adaptive learning is an educational method using computers as interactive teaching devices, adapting educational material according to student's learning needs.

The technology incorporates the interactivity previously only afforded by an actual human teacher, and integrates ideas from various educational fields, including computer science, education, and psychology.

Knewton:

Knewton is an adaptive learning company. it has developed a platform to personalize digital content at all educational sphere.

At knewton, we believe that technology has the potential to transform what's possible in education. personalizing learning for the world has been our mission since 2008.

Design the best adaptive technology that delivers lasting impact to put achievement within reach for all.

Alta is a knewton's newest product for higher education. It is a complete courseware solution that combines knewton's expertly designed adaptive learning technology with high quality' openly available content to deliver a personalized learning experience that is affordable, accessible and improves students outcomes.

BenchPrep

Benchprep is an online learning platform that helps prepare for standardized tests, professional certifications and k-12 classroom learning. The company has developed web and mobile apps that can be used on computers, tablets, and smartphones.

Benchprep consolidates curriculum and study tools into a cohesive and comprehensive learning experience. Through a simple, easy to use digital dashboard, it indicates progress and performance, recommends readings, activities, and additional resources a personalized learning path to maximize their learning efficiency.

Smart Sparrow:

The smart sparrow software tools, known collectively as the adaptive elearning platform, are a web-based suite that develops adaptive learning content and applications, deploys that material to students and analyses how students learn from their responses to the material.

Smart sparrow is an ed-tech start-up, the commercialization of an adaptive learning technology incubated within the adaptive elearning research group at the school of computer science and engineering at the university of new south wales in Sydney, Australia.

The prominence of the ADDIE Method

The ADDIE model of instructional design has almost become a standard for creating course content in our digital age and understanding it may help our students arrive at better learning outcomes and higher learning retention rates.

In order for the ADDIE method to work successfully, each step must be thoroughly completed in order. It can be tempting to cut corners, and skips steps in the process, but returning to previous steps is very difficult and time consuming.

ADDIE is similar to the scientific method, in that it is the skeleton upon which all instructional design strategies are built. It is a great jumping off point, with clear steps and procedures that are simple for beginners to understand, yet still employed by experts.

Parameter Of Digital Courseware:

Need analysis

It is very important to define the needs before developing the digital courseware. Needs can be identified from the perspective of different stakeholders like learners, teachers, subject experts, practitioners, policy makers etc. It can also be based on the findings of primary and secondary research studies and can be inferred from the current scenario of the educational setup.

Context analysis

It is the collection of data to understand the physical, technical and socio-cultural contexts in which the Digital courseware will be used.

Learer analysis: (Target Audience)

It refers to capturing data with respect to the target audience.

Content Analysis :

Content analysis defines the scope, appropriateness and nature of the Digital courseware. Good content comprehension is required before designing and developing content. It also helps in understanding the purpose and mode of using Digital courseware.(The Department of School Education and Literacy (DSE&L) MHRD, Govt. of India).

Learning management system

Learning Content Management Systems and Learning Management Systems

Learning Content Management Systems are software systems for the creation, storage, and management and usage of learning content (Transform, 2003).

LCM can track individual learning results throughout the course and provide learner–centered detail. Learning Management Systems have a similar range of functions to LCMs. LMS include "authoring, classroom management, competency management, knowledge management, certification or compliance training, personalization, mentoring, chat and discussion boards" (Transform, 2003).

Darby (2004), representing the British perspective on LCM, feels that LCM are superior to LMS in their facility for building and maintaining all the elements from which a course is built and their provision of a course structure or hierarchy.

Darby (2004), however, considers that LMS are exclusively concerned with the delivery of learning programs and the management of students.

Pedagogical Benefits of digital courseware:

- Multi - media, using close-ups, or highlighted text, statement of learning objectives and use of advance organizers (video segments are an ideal medium for this purpose).
- Recall of prior knowledge to working memory presenting information in the proper sequence using media that is best suited for stimulating learning (visual, audio, real object, etc.).
- Providing context to associate new information to larger schema or propositions.
- Questioning the student on the main points or requiring the student to summarize the lesson;
- Providing the student with a timely response about the correctness of their answers and clarifying misconceptions through interactive systems, testing or requiring the student to restate information in their own words. Providing additional examples or using mnemonics.
- Digital learning is the information processing perspective, which considers learning as a change in knowledge in our stored memory.
- When student pay attention to inputs into our sensory register, these inputs (information) become part of our working (short-term) memory.
- If learner want to retain this information, it needs to be encoded as schematic into our stored (long-term) memory.
- Learners can retrieve all information from our stored memory to use it later.
- Teachers can support students to process information by helping them to organise new information, link it to their existing knowledge and use memory aids to retrieve information.
- Using Digital teaching learning process in the classroom allows learner to experiment more in pedagogy and get instant feedback.
- Digital learning environment in the classroom helps ensure full participation. There are countless digital resources for enhancing rich education and making learning with conceptual clarity and retention. (Saraswathi G and Leo Stanly S)

CONCLUSION:

Computer assisted multimedia courseware enhances learning rate. Students learning rate is faster using computer assisted multimedia courseware than with conventional instruction.

Digital curricula in the hands of supported and equipped instructors have significant potential to personalize learning and to lead to the delivery of high-quality education that meets the needs of today's postsecondary students. But that impact will only be realized if technology solutions are able to successfully scale. New offerings with greater capacity to adapt to faculty needs are unlikely to transition from pilot to scale unless more than just the early adopters or “tech-savvy” faculty are engaged from the beginning.

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