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Role of Internet in Contemporary Architectural Pedagogy

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Abstract: ***The growth of technology has advanced each and every scenario in the field of the profession as well as in education. Innovation took place with the growth of the economy and another governing factor. Our basic approach in this research would be practically defining some prospects in the field of pedagogy related to architecture and how architectural education evolved in many ways. Pedagogical skills improvised from one generation to another which brings changes to the education. It has been developed in a way scope of innovation with the help of innovation and technology is possible. This dissertation will be related to the architecture. How the pedagogy is changing day by day, what is its impact on students does it a process of learning and experience the share of the teaching and learning environment. I would be able to express my views about architectural pedagogy should be done and what innovations it needs. To enhance the teaching and learning environment huge exercise to be done. Means the proper set up of curriculum and management because without that the improvisation will not be as well as executed in an efficient manner. Architecture is the study that covers practical and theoretical aspects of teaching. Pedagogy covers many topics which are related or studied via internet, not by any other means. Internet incorporates many things, related to architecture in the form of art, design, and interior. Architecture doesn't exist in isolation. It exists in the context of people, place, period and philosophy. They are very distinctive on their own.***

Keywords: Internet, Pedagogy, Blended Learning, Blended learning models, Architectural Design Pedagogy.

INTRODUCTION

The Internet has become a lifeline in educational field because it has an unlimited source of knowledge imparted by internet. The education has a huge scope on internet (or learning through the internet) .Journals, newspapers, magazines available books etc., research papers and to review them from anywhere in the world with the help of internet. Role of this technology comes with major deficiency means its initiative stages like using internet with the huge system of networks & Wi-Fi. It has only this deficiency else the problem is minor & comes with the solution. Internet became a hub of learning, as well as knowledge imparted by the internet, is vast and in depth with all the dimensions, parameters, characteristics & approach. Maps showing topographical conditions and existing features of the site available on the internet. The relationship between fact & hypothesis is created in architecture education to link both the things the internet is playing its role. Innovative ideas, functional aspect, topographical features, innovative technologies etc. are also coming from the internet. In depth of the paper written on the net are as well as valuable for future generations we may or may not find the stuff in the particular library but we can find it on the internet. Due to its accessibility & it consumes less time than others. Time saving technique with the fruitful knowledge in various fields no classified or specific topic written on net, knowledge all the subjects is available on the internet. We use it for our reference, understanding and to make students aware of that particular topics, to make them precise & more knowledgeable towards that technology. Likewise, internet in connection to pedagogy has a huge influence on not only in architecture but in almost every field. This has become a boom in knowledge sharing aspect because it is the only medium with so many flexibilities, accessibility & application. It has become a part of the day to day life. Without net we can't travel even with the help of navigator we find our way in a known place. As a guide, it tells us the way to reach our destination.

LITERATURE REVIEW

Introduction to Internet

The Internet has revolutionized the computer and communications world like nothing before. The invention of the telegraph, the telephone, the radio, and computer set the stage for this unprecedented integration of capabilities. The Internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographic location. The Internet represents one of the most successful examples of the benefits of sustained investment and commitment to research and development of information infrastructure. Beginning with the early research in packet switching, the government, industry, and academia have been partners in evolving and deploying this exciting new technology. This is intended to be brief, necessarily cursory and incomplete history. Much material currently exists about the Internet, covering history, technology, and usage. A trip to almost any bookstore will find shelves of material written about the Internet. Several of us involved in the development and evolution of the Internet share our views of its origins and history. This history revolves around four distinct aspects. There is the technological evolution that began with early research on packet switching and the ARPANET (and related technologies), and where current research continues to expand the horizons of the infrastructure along several dimensions, such as scale, performance, and higher-level functionality. There are the operations and management aspect of a global and complex operational infrastructure. There is the social aspect, which resulted in a broad community of Internets working together to create and evolve the technology. And there is the commercialization aspect, resulting in an extremely effective transition of research results into a broadly deployed and available information infrastructure. The Internet today is a widespread information infrastructure, the initial prototype of what is often called the National (or Global or Galactic) Information Infrastructure. Its history is complex and involves many aspects - technological, organizational, and community. And its influence reaches not only to the technical fields of computer communications but throughout society as we move toward increasing use of online tools to accomplish electronic commerce, information acquisition, and community operations.

ROLE OF INTERNET IN ARCHITECTURAL PEDAGOGY

- Although pedagogy is sometimes seen as a nebulous concept, it is essentially a combination of knowledge and skills required for effective teaching. The more traditional definitions describe pedagogy as either the science/theory or art/practice of teaching that makes a difference in the intellectual and social development of students.

- More specifically, new research is defining pedagogy as “a highly complex blend of theoretical understanding and practical skill” (Lovat, ACDE, 2003). This research is highlighting the vast complexity of teachers’ work and specifying just what the nature of that work truly is. As Lovat further emphasizes: a teacher is “a highly developed autonomous professional, with a requisite professional knowledge base and practitioner skills which could stand alongside the equivalent in medicine, law, and engineering” (ACDE,).

- Different research and theories may underpin different models of pedagogy but it is the contention of Free body and Luke that within a certain range of procedures, differing teaching approaches work differentially with different communities of students; and effective teachers know that” (A Map of Possible Practices, Luke & Free body, June 1999).

- Effective teachers “have a rich understanding of the subjects they teach and appreciate how knowledge in their subject is created, organized, linked to other disciplines and applied to real-world settings. While faithfully representing the collective wisdom of our culture and upholding the value of disciplinary knowledge, they also develop the critical and analytical capacities of their students” (NBPTS 1999, 3-4 in Lovat, ACDE p12).

- In other words, good pedagogy requires a broad repertoire of strategies and sustained attention to what produces student learning in a specific content domain, with a given group of students and a particular teacher. Teachers need to rely on quality educational research for different

  pedagogical models and strategies; at the same time, they have to practice the art and science of teaching themselves, refining it as they go according to their own needs and resources and particularly those of their students.

BLENDED LEARNING

Introduction

- “Blended learning is replacing "e-learning" as the next big thing. Blended learning programs are perhaps the highest impact, lowest cost way to drive major corporate initiatives.” (American text book) , the origin of the term in the USA… , No clear single definition available and no clear common understanding either difficult to translate into different languages

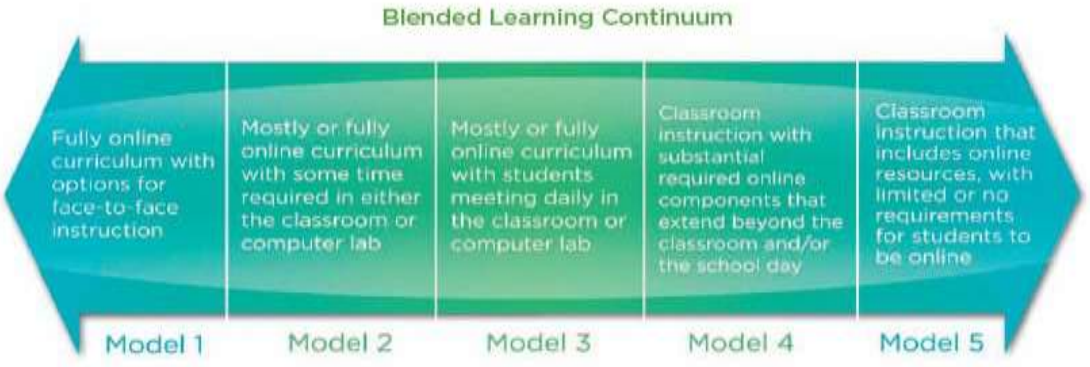
- **Alternative Names:**
  1. Mixed learning
  2. Hybrid learning
  3. Blended e-learning
  4. ”Melted Learning” (in Finnish)

- "The thoughtful integration of classroom face-to- face learning experiences with online learning experiences"
- "Blended learning combines online with face-to-face learning. The goal of blended learning is to provide the most efficient and effective instruction experience by combining delivery modalities".
- "Blended learning - mixed mode or hybrid - learning is the integration of face-to-face (F2F) learning with online learning activities"
- " A solution that combines several different delivery methods, such as collaboration software, Web-based courses, EPSS, and knowledge management practices"
- "Learning that mixes various event-based activities, including face-to-face classrooms, live e-learning, and self-paced instruction. "
  "Blended learning is the *effective* combination of different modes of delivery, models of teaching and styles of learning"
- Blended learning is the combination of multiple approaches to pedagogy or teaching. For example:- self-paced, collaborative or inquiry-based study (Wikipedia)
- " A mix of different didactic methods and delivery formats"

DETAIL DESCRIPTION

- Blended Learning as **face-to-face classroom teaching combined with some form of technology based distance learning**
- Blended Learning as **new pedagogical model**, which combines the best parts of face-to-face and online learning
- Blended Learning as a **combination of different learning environments** (classroom, work placement, project work)
- Blended learning as a **means to introduce modern learning theories** into Higher Education.
- Combining or mixing web-based technology to accomplish an educational goal;
- Combining pedagogical approaches ('e.g. constructivism, behaviourism, cognitivism') to produce an optimal learning outcome with or without instructional technology;
- Combining any form of instructional technology with face-to-face instructor-led training; and
- Combining instructional technology with actual job tasks.

BLENDED LEARNING MODELS



INCREASED FLEXIBILITY IN LEARNING

Components of the Blend:

- **Online Component**
  - Significant portion of the class time
  - Enabling dispersed students to attend.
- **Face to Face Component**
  - On Campus
  - *Or another Agreed-upon Location*
  - Many possible Variations

- **Blending together these components to leverage new learning opportunities that are *neither* online nor campus-limited**

a) New learning models can be leveraged by the blended approach.
b) Alternative locations
c) Alternative events
d) Alternative scheduling
e) Preparation/Reflection/Research wrap-around through the online mode

Components of Blended Learning

1. *Synchronous* (live) Classroom format

2. *Synchronous* (live) Online format

3. *Asynchronous* (not live) Self-paced format

1. Synchronous Physical/Face-to-Face Components (not limited to) Components Of Blended Learning Dimensions of the Blend

Components Of Blended Learning
• Face-to-face Tutoring
• Coaching or Mentoring Sessions
• Classroom
• Workshops
• Conferences
• Meetings
• Labs

2. Synchronous Electronic Components (not limited to)

Components of Blended Learning
• Internet conferencing
• Audio Conferencing (i.e., phone conferencing)
• Live Video via satellite or Videoconferencing
• Virtual Online Classroom
• Instant Messaging

3. Asynchronous Components (not limited to)

Components of Blended Learning
• On-line self-paced Learning Content (Web pages)
• E-mail, Discussion Forums
• EPSS (Electronic Support Systems) & Job Aids
• Web/Computer-Based instruction
• Books , Articles
• CD-ROM , Audio (disc/tape), Video (disc/tape)
• Archived Live Events

Advantages and Disadvantages of Blended Learning Components

Advantages of Classroom	Disadvantages of Classroom
Motivation	Instructor
Responsiveness	Scheduling
Experiences	Audience
Team Building	Travel
	Physical

Advantages and Disadvantages of Blended Learning Components

Advantages of Self-Paced on-line	Disadvantages of Self-Paced on-line
Learn anytime, anywhere	Bandwidth
Time savings	Interaction
Cost Efficient	Development
Learner control	Cost
	Drop-Outs

Advantages and Disadvantages of Blended Learning Components

Advantages of CD-ROM	Disadvantages of CD-ROM
More Engaging	Content
No Internet Connection	Peer-to-Peer
	Development

Advantages and Disadvantages of Blended Learning Components

Advantages of Videoconferencing	Disadvantages of Videoconferencing
Savings	Quality
Participation	Technical Support
Visual	

Dimensions of the Blend

A blended learning program may combine one or more of the following dimensions:

a. Blending Offline and Online Learning.
b. Blending Self-Paced and Live Collaborative Learning.
c. Blending Structured and Unstructured Learning.
d. Blending Custom Content with Off-the-Shelf Content.
e. Blending Learning, Practice, and Performance Support.

ANALYSIS & INTERPRETATION

Role of internet in Architecture Pedagogy

- The Internet has an important role in architecture pedagogy because it's not the subject of cramming.
- It needs exposure and today's scenario exposure is given through internet. If we talk about building in abroad we need internet as a virtual eye to see that particular project or building.
- If we can't go abroad, but we can see the building through the internet so the proximity is increased in terms of learning and teaching both.
- Now if we discuss contemporary times all the buildings are available on the internet in any form like JPEG, PNG, GIF and TIFF format.
- We can easily download them see them in detail.
- We can also judge that whether the building is sustainable or not.
- The Internet brings a huge revolution in building forms and technology.
- Advancement reaches one level from another.
- It provides market industrial sector, commercial sector easily.
- As far as pedagogy is concerned the approach is holistic in which we have to cover all the aspects such as design, construction, structure, services which give a new way to architecture to attain the level of learning. We tend to learn more things via the internet.
- Book reading is a traditional way of learning which has more of theory fewer pictures but internet adds pictures and other interesting things which are retendered for more time in our minds.
- To make learning/teaching a flexible the need is generated where the internet has a role in each and every part of learning and teaching in a simpler form.

Role of blended learning in Architectural Pedagogy

- It is the part of learning which incorporates virtually as well as a physical classroom environment.
- It amalgamates many things together to achieve the desired result.
- Both the environment internet together and form a composite type of learning which has a huge part.
- Architecture has some theory and practical subjects, some of them guidance form expertise of that particular topic some of them are into core teaching so the system is so evolved that some pedagogical skills are developed and others are developing.
- Blended learning approach teachers through different methodologies: synchronous, asynchronous, format. Both the format can work in architecture.
- We can approach both the methods of teaching and learning aids, in a component of blended learning:

1) Synchronous (live) classrooms Format

This format can be used teaching core subjects in architecture because they are if prime importance and carry equal importance in marks and as well as market subjects like architectural design and construction.

2) Synchronous (live) Online Format

This method can be used for teaching associated subjects in architecture because theory subjects need lectures and discussion methods. Both the things can be done through this type of format subjects like structure, services and workshops can be catered through this method.

3) Asynchronous (not live) Self-placed Method

This method can be proposed for allied subjects they need some research to be done by the teacher and student regarding that particular topic. Subjects that area research oriented can be taught by this format. The elective subject like interior design, green architecture, urban design, town planning can be taught because for this we have research about this topics and we discuss each and everything with our guide. He/she can give us reply and make us more aware of that particular subject that what are things that should be covered up in the dissertation or a report which a student is giving.

FINDINGS & IMPLICATIONS

- Research related to the topic internet is summing up in varied variations of distinctive features of pedagogical skills incorporated into architecture to teach students.
- It is not an easy task to teach people in a manner that can be 100% effective in any parameter it can be.
- Every methodology has some pros & cons & this methodology also has some of them besides having the technology we people are not using in a proper manner.
- Virtual design studio can be incorporated into our colleges but due to unavailability of resources, this method is not introduced in our colleges.
- People come from different parts of the world to learn architecture in India & abroad as well.
- It needs exposure & internet is giving exposure to students & teachers.
- The approach of blended learning is also of composite kind of thing in which many variations took place according to the teacher to make learning flexible, easy & there should be a place for innovative ideas.
- All the activities are managed so that systematic approach should not be lost.
- All the innovative methodology which approaches to architectural pedagogy & its improvisation in a way is our motive.
- Many languages like vrml- virtual reality modeling are also the part of technology as discussed in this report but the user interface is totally dependent upon the syntaxes entered in to the computer or software.
- It may or may not be difficult for the user to understand it properly.

CONCLUSION

- Concluding that all the technology studied under this report in different chapters which is helpful, reliable sources on which architectural pedagogy can be improved according to the current scenario.
- Its succession can be achieved by the type of methods that are involved under these headings which gave us the new ways to learn architecture gave us new prospects for architecture, with the help of technology.
- Working in collaboration with other colleges & universities we can take the huge diversity of faculties in various departments. Exchange of thoughts will be there & knowledge imparted by different people of the field who are known as the visionaries in architecture.
- Knowledge sharing shows a tremendous change in the process of learning as well as in the teaching of the whole scenario.
- Some new approaches will be observed & implemented in this system, which leads to the betterment of the students as well for the teachers.
- Some approaches like blended learning coming from both the elements of the virtual & traditional classroom environment, both of them are amalgamated to innovate a new one, which is unique in its own way.
- Different subjects are there which can be taught through this method, design studios which are totally dependent on setup for collaboration may or May not successful in architecture studio's where resources are limited.
- If resources are there then the execution should be sound so that it may not cause any discrepancies. We need faculty for this or we have to train them for learning this type of methodology, which is as open as learning from any source & anywhere.

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