

"E-Learning as Edutainment – The Challenge for Educators"

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บทคัดย่อ

บทความนี้เป็นความพยายามในการแนะนำความหมายของ Edutainment ซึ่งเกิดจากการผสมระหว่างคำ Education กับ Entertainment การเจริญเติบโตของการเรียนรู้ทางอิเล็กทรอนิกส์(E-Learning) และการประยุกต์ ICT จากพัฒนาการที่เกิดขึ้นและเครื่องมือทางด้าน MCE เป็นปัจจัยสำคัญที่ทำให้มีโอกาสและความเป็นไปได้ของการเจริญเติบโตของ นันทนาการศึกษา (Edutainment) กล่าวกันว่าพัฒนาการของ Edutainment จะช่วยให้นักศึกษาสามารถควบคุมและปรับปรุงการเรียนรู้เพื่อสนองต่อความต้องการและความท้าทายต่างๆในศตวรรษที่21ได้เป็นอันมากรวมทั้งทำให้การศึกษาตาม ประเพณี นิยม (Traditional Edutainment) จากความเชื่อที่ว่า “ครูเป็นผู้รู้ดีที่สุด” เป็นสิ่งที่ต้องยกเลิกไป เพราะมีข้อเท็จจริงหลากหลายที่ขัดแย้งกับแนวคิดดั้งเดิมดังกล่าว

จากการแสดงให้เห็นความแตกต่างอย่างชัดเจนระหว่าง ข้อมูลข่าวสาร (Information) กับความรู้ (Knowledge) จะเห็นได้ว่าความรู้ใหม่ซึ่งเป็นสิ่งเฉพาะ (Unique) ตัวผู้เรียน จะไม่เกิดขึ้นถ้าข้อมูลข่าวสารมิได้มีการประมวลผ่านสมองของผู้เรียน บทความนี้นำเสนอตัวแบบการเรียนรู้ของโจนส์ (The Jones Model of Learning) เพื่อแสดงให้เห็นว่ากระบวนการดังกล่าวนี้ดำเนินไปอย่างไรภายใต้การควบคุมของผู้เรียนแต่ละคน

บทความนี้อภิปรายถึงการเจริญเติบโตอย่างรวดเร็วของ Hypermedia และ Hypertextกับความเป็นไปได้ที่เกิดขึ้นในการออกแบบสาระของ Edutainment ยุคใหม่สำหรับนักศึกษา ด้วยการที่มีการขยายตัวอย่างรวดเร็วของ Social websites และความเชื่อมโยง กับ Websites อื่นทาง Internetอย่างกว้างขวาง จึงเป็นความท้าทายและโอกาส สำหรับการสร้างวัสดุอุปกรณ์ใหม่ๆทาง Edutainment

คำสำคัญ : การเรียนรู้ทางอิเล็กทรอนิกส์ นันทนาการทางการศึกษา การศึกษาที่ให้ผู้บริโภคเป็นศูนย์กลาง

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Abstract

This Paper has attempted to introduce the reader to the notion of a marriage between Education and Entertainment to create what is called Edutainment. The sheer growth of E-Learning and the application of new and evolving developments in ICT and MCE devices create many new possibilities and opportunities for the growth of Edutainment. It is argued that these Edutainment developments will greatly assist students to increase control over, and improve their own learning to meet their needs and challenges in the 21st century, while also forcing Traditional Education to move away from its belief that the ‘Teacher knows best,’ when there is a wealth of evidence to the contrary.

A clear distinction is made between Information and Knowledge, pointing out that until and unless Information is processed by the learner’s brain it cannot be converted into new Knowledge, which will then be *unique* to the learner. The ‘Jones Model of Learning’ is presented to illustrate how this is done under the control of each learner.

The rapid growth in Hypermedia and Hypertext is discussed together with the possibilities these have for the design of new Edutainment content for today’s students. Finally, with the rapid growth of social websites and new and powerful cyber connectivity sites emerging on the internet, these present new challenges and opportunities for the creation of new Edutainment Designed materials.

Keywords : E- Learning, Edutainment, Consumer Centric Education.



Introduction

With the twin parallel emergence of Demand Driven Consumer Centric Education and the massive growth in Social websites this is a time to re-examine how Education and Entertainment can be brought together in new and exciting ways to complement each other and create Edutainment

Edutainment is defined as a form of entertainment designed to educate. Edutainment typically seeks to instruct or socialize its audience by embedding lessons in some familiar form of entertainment: television programs, computer and video games, films, music, websites, multimedia software, et al. Most often, edutainment seeks either to tutor in one or more specific subjects, or to change behaviour by engendering specific socio-cultural attitudes. Various groups in the United States and the United Kingdom have used edutainment to address such health and social issues as substance abuse, immunization, teenage pregnancy, HIV / AIDS, and cancer.

This Paper explores some of the recent developments in Education and Pedagogy together with both hardware and software that facilitate the creation and development of Edutainment.

Conservative estimates report that the worldwide e-learning industry is worth over 38 billion euros. However, the European Union only produces about 20% of e-learning products. The main sectors and enablers of eLearning are internet developments, the growth of multimedia technologies and services.

Growing Numbers using E-Learning

There has been a massive worldwide growth in the number of e-learners. As an example of this rapid growth, the 2010 Sloan Survey of Online Learning reveals that enrollment rose by almost one million students from a year earlier. The survey of more than 2,500 colleges and universities nationwide finds approximately 5.6 million students, up from 3.6 million in 2006, were enrolled in at least one online course in fall 2009, the most recent term for which figures are available.

Elaine Allen, Co-Director of the Babson Survey Research Group and Professor of Statistics & Entrepreneurship at Babson College reported that *“Nearly thirty percent of all college and university students now take at least one course online.”*

http://sloanconsortium.org/publications/survey/class_differences

Additional report findings include:

- *“Almost two-thirds of for-profit institutions now say that online learning is a critical part of their long term strategy.*
- *The 21% growth rate for online enrollments far exceeds the 2% growth in the overall higher education student population.*
- *Nearly one-half of institutions reports that the economic downturn has increased demand for face-to-face courses and programs.*
- *Three-quarters of institutions report that the economic downturn has increased demand for online courses and programs.”*

Many technologies can be, and are, used in e-Learning, from blogs to

collaborative software, ePortfolios, and virtual classrooms – see references below. Most eLearning situations use combinations of these techniques. Most higher education for-profit institutions, now offer on-line classes. By contrast, only about half of private, non-profit schools offer them.

The Sloan report “Making the Grade: Online Education in the United States, 2006” based on a poll of academic leaders, says that “students generally appear to be at least as satisfied with their on-line classes as they are with traditional ones. Private Institutions may become more involved with on-line presentations as the cost of instituting such a system decreases. Properly trained staff must also be hired to work with on-line students. These staff members must be able to not only understand the content area, but also be highly trained in the use of computers and the Internet.” Online education is rapidly increasing, and online masters and doctoral programs have been developed at leading research universities in the USA, Europe, Australasia and Asia, e.g. Harvard University, USA <http://extension.harvard.edu/alm>; The

Open University, UK

<http://www.open.ac.uk/>; University of New South Wales, Australia

<http://www.mbt.unsw.edu.au/facetofacedistanceclasses.html>; and Assumption University in Thailand www.au.edu.

Collaborative software spending is up by 14.8% in 2008 according to Allan Alter who reports on the Ziff Davis Enterprise 2008 Collaborative Survey. <http://www.cioinsight.com/> Other interesting findings are that

- Wikis were the 4th most used collaboration tool without IT support.
- Employees 18-30 are fastest to adopt new tools, but employees 31-49 were slightly more effective at finding the most useful ones.

Consumer Centric Education – the next wave “Edutainment”

While Traditional Education Models abound throughout the world there is a growing demand for Consumer Centred Education (CCE), driven in part by developments in Information Communications Technology (ICT), the growing diversity and power of Mobile Consumer Electronic (MCE) Devices for easy access, combined with

the emergence and popularity of Social Networks.

Edutainment can now be customized and personalized with Cultural inputs for different learning groups and made available to anyone, anywhere and at anytime. Furthermore, it is increasingly feasible to build Edutainment on the Great Story Telling Traditions of the World as exemplified through Hollywood and Bollywood.

One of the fastest growing applications using ICT today is Computer and other MCE Video and Computer Games attracting a worldwide following. Visit any internet café today in countries as far apart as Ireland, USA, Thailand, Vietnam, Turkey and Tajikistan (all visited by the author recently) and there will be on-site Gamers widely available. The combinations of computer access to Video Games, and wireless hand-held devices able to access the internet have both helped to drive this growth in Gamers. In addition, the variety and range of interactive games make them ever more popular especially among the younger generations. We are also witnessing the blurring of lines between Film Studios and Hardware manufacturers such as Sony who have taken up a strong presence in the Gaming sector.

The application of games as education tools has been growing over the past few years as Educators and Manufacturers have both begun to exploit their educational potential. Both games and simulations are important ways of teaching online according to Prensky (2002) and Aldrich (2003) because today's youngsters (*and adults*) seem to be excited by games, all learning should be interactive and engaging. Learning can come in a mix and match process that can be recombined to meet the unique content needs of learners (Longmire, 2004).

Teacher vs Learner Control of Education

Before addressing new Edutainment options both in terms of Hardware and software development that provide many exciting challenges for both Teachers and Students, it is worth briefly addressing the issue of Control over Learning. Traditional Education has been primarily under the control of those who are on the supply side, namely, Ministries of Education, curriculum designers, Educational Institutions and teachers, with little thought given to what the student demands. This has always been predicated on the belief that the 'Teacher knows best.' However, having been an Educator for 40 years now, this has never been my position, nor has there been

convincing evidence of its success. On the contrary, many teachers have often questioned why after 10 years of schooling at the primary and secondary levels, many students graduate with so little knowledge of most subjects, whether languages, history, geography, mathematics, science, commerce, etc.? How can this be? The answer lies in the underlying tenet that the 'Teacher knows best.' Yet, if this were true why is it that so little is actually learned in school relative to the enormous amount of time spent attending classes? Why is it that many graduating students are so ill equipped for their role in society or their ability to get and hold onto employment and thus contribute to the development of their society? A recent contributor to an International Education Conference in Thailand who is a reputable American Educator in Chicago stated that each year up to 40% of all American High School graduates have literacy and mathematical levels equivalent of a 10-12 year old, when in fact their chronological age is 17 to 19 years old. What an indictment this is of the so-called Teacher Control of Education? How often have we heard from language teachers that students cannot seem to learn poetry, yet if you listen to these same students they can sing all the popular songs of the day, and can even write the lyrics for new songs – a song being in many cases a poem put to

music. Why is it that Mathematics teachers say that students don't seem to know the basics, and yet these same students can make very complicated calculations on the odds for backing horses or gambling at a card game?

Some of the major arguments against Teacher Control in Education today are as follows:

- Most Teachers have spent their entire lives as part of the Education system, first as students, then as HS graduates, on to College to study for their specialised (subjects) degrees followed by Teacher Training and then back to the classroom again as teachers.
- They thus have little real work-life experience outside the classroom.
- They are not well versed in the many new career and job opportunities opening up in the work world of today that their students will need to be equipped to enter and succeed in.
- They are frequently well behind their students in their use of ICT and MCE devices.
- They still fundamentally believe that the 'Teacher knows best,' despite all the evidence to the contrary and the abject failure of traditional Education to meet the

challenges of the 21st century.

- Teachers continue to rely heavily on outdated textbooks and information sources rather than keeping up-to-date with what is available on the web.
- They continue to treat the learning for all students as if they can learn at the same pace, when this is not the case.
- Their dominant Behaviourist approach does not allow for student individuality, differences, and unique ways of learning.
- No matter how much the teacher imposes their dominance when it comes to
- content, sequencing, pace, practice, the level of difficulty, and evaluation methods, their students always adapt to this to the extent that they wish.
- The teacher often places more emphasis on their own teaching to meet certain curricular guidelines and timetables rather than on student learning, which is after all the real purpose of Education – Educare, to 'draw out' of the individual, and not to 'put in' large amounts of unprocessed information, that is easily forgotten.

Some of the major arguments for Student Control in Education today are as follows:

- Students are able to tell what works for them and what doesn't when it comes to learning.
- They alone, understand their own attitudes and motivations to learn, and are also in control of how to change them if needed.
- They can define what 'turns them on' and what 'turns them off' about individual teachers and classroom learning.
- They are not wedded to their textbooks as teachers are.
- They are reared in a time of mass communications and developments in ICT and the growing power and diversity of MCE devices, and are in many cases using a variety of these.
- They are better 'connected' to diverse sources of information and learning material through both the internet and the world wide web, also through the many cyber social network sites available to them and their ability to manipulate data using the ICT at their disposal.
- Students learn in different ways, using different learning styles or

modes, and also at a different

pace. Not all students in a subject classroom will be at Chapter 4 at the same time, some will not have fully understood Ch 2 or 3 while others would prefer to be at Ch 5 or 6.

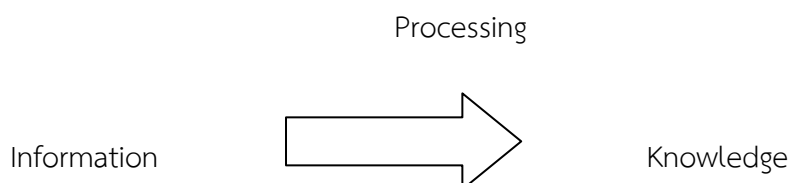
- Students learn much of what they know through a Constructivist approach to learning, consistent with their own styles, pace, and motivations.
- No matter what the teacher tries to impose on his/her students in terms of content, sequencing, pace, practice, the level of difficulty, and evaluation methods, the student will come to class or skip class as they choose, they will work hard on some chapters or topics and leave others, based on degrees of difficulty, quality of the teaching inputs, and their own motivations.
- Each student is unique in the way they learn and how they learn, and will adapt to each classroom's inputs and tasks as they choose. They will also extend their search for meaning and understanding outside the classroom using resources and information sources that extend way beyond what the

teacher will do. Think of how a student with an interest in the guitar will explore all genres of guitar playing from the great musicians of the past whether the Spanish Classical guitarist Segovia, the works of BB King and Willie Nelson in the USA, Eric Clapton in the UK or The Edge of Ireland's U2 fame. In a similar vein, those interested in computers and software development have started multi-million dollar internet businesses while still at school, or others have progressed into the professional sports arena, all driven by their own desire for success, and often against the guidance or advice of their teachers.

Information Vs Knowledge

As background to the above points about Teacher vs Learner Control over learning, according to this author, *Learning* is the processing of information that leads to knowledge (see figure 1). It is *unique* to the learner, but may be similar to what others have concluded by their processing of the same information. To share this knowledge is to give it to another person as information for their individual processing. The result of their processing is that they then convert this information into their own knowledge

Figure 1. Basic Learning Model



However, in reviewing the literature on Education it seems that most authors use these terms interchangeably when in fact they are not the same. Understanding this essential ‘fact’ makes a huge difference to how Education and Learning are viewed. For example, my knowledge will be *unique* to me and you the readers’ knowledge will be *unique* to you. As you read this Paper in which this author shares his knowledge with you, you can only receive this as ‘information’ that you then will need to process to finally come to your own understanding and synthesis of your own knowledge about the Paper. This may well differ from the author’s knowledge and that is fine. An example of this erroneous inter-changeability of ‘Information’ and ‘Knowledge’ is illustrated in T. Brown’s Paper (1997) on “Constructivism”

http://scs.une.edu.au/573/573_5.html

where he starts talking about ‘Information’ and ends referring to ‘Knowledge’ as an example of it. *“Unfortunately, much of the current education system is based on secondary sources of information. Teachers receive much of their Information from secondary sources, further process it and pass it on to their*

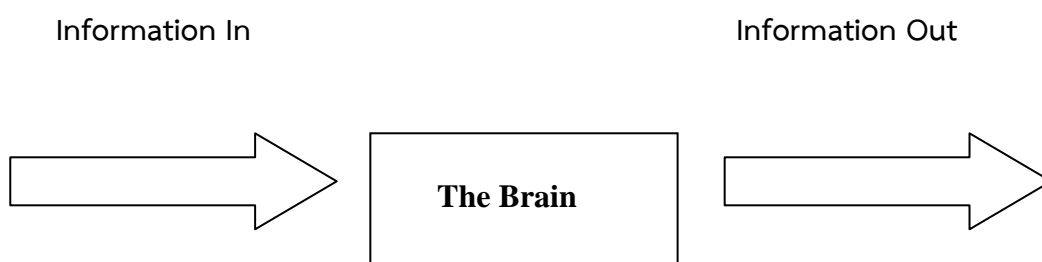
students; the authors of textbooks do the same thing, and so on. Unfortunately, there is no real alternative to this situation as each individual has not got the time to obtain all the information that they need from primary sources. Even in traditional communities where the knowledge base would be much smaller than in our society, secondary knowledge was passed from parent to children. During the course of their lives, these children would gain knowledge from primary sources and pass this, plus much of the secondary knowledge that they gained from their parents to their children.”

In the Traditional Learning Model, which is used in most schools -- the **Information In** comes from the instructor, a text, or some other resource material used in the classroom. The brain is virtually by-passed in this process. Thus, the **Information Out** tends to be very similar to what went in. In the case of classroom learning -- in a test or exam situation -- as long as the **information out** is similar to the *information in*, then the instructor feels that they have done a good job. Furthermore, as long as the *information out* is similar to the **information**

in, then the student feels that they have done a good job. Learning is erroneously

perceived by both to have occurred.

Figure 2. Traditional Learning Model



What's wrong with this? The main problem is that the brain is not effectively utilized in the processing of the *information in*. The brain minimizes its activity by only storing the information for later recall, not for processing it into knowledge. There is no attempt by the learner to actually make use of the *information in* except for the purpose of recalling it later in a test or examination. This is why it is questionable whether students would still get the same, or even similar grade results, if they were to re-sit their exams again at the time they get their results a few weeks later?

If the brain is not engaged in processing the *information in* the learner is left to think (s)he has achieved some beneficial result by merely recalling the *information in* at a later date. The instructor implies that learning has occurred by the mere fact of later recall by their students. Not sufficient regard is taken of the importance of processing the *information in* to convert it to *knowledge*. The result! Both the instructor and the learner are deceived by this apparent learning, when none has actually occurred. The school system has done harm to both the instructor and the learner. The brain of the learner is virtually ignored in this process. The less impact of

the brain on **the information in** the better. Too much interaction with the **information in** will result in the **information out** being very different.

The Jones Model of Learning (Jones, 2006)

In attempting to make sense of all of this, this author spent ten or more years reflecting on **how he learned** and observed **how others learned**. He had plenty of opportunities to do this as he spent a total of 14 years taking college courses at universities in Ireland, Canada and the UK. He trained as a secondary school teacher, and taught secondary

school science and mathematics in Ireland, Canada, and Sierra Leone. He also had the opportunity of training teachers in all three countries. The result of his explorations was the creation of

“The Jones Model of Learning.”

This is a five step process which centres on the processing of an information stimulus, from whatever source - a teacher, text, video, movie, a conversation with a colleague, or whatever

It is illustrated here in Figure 3

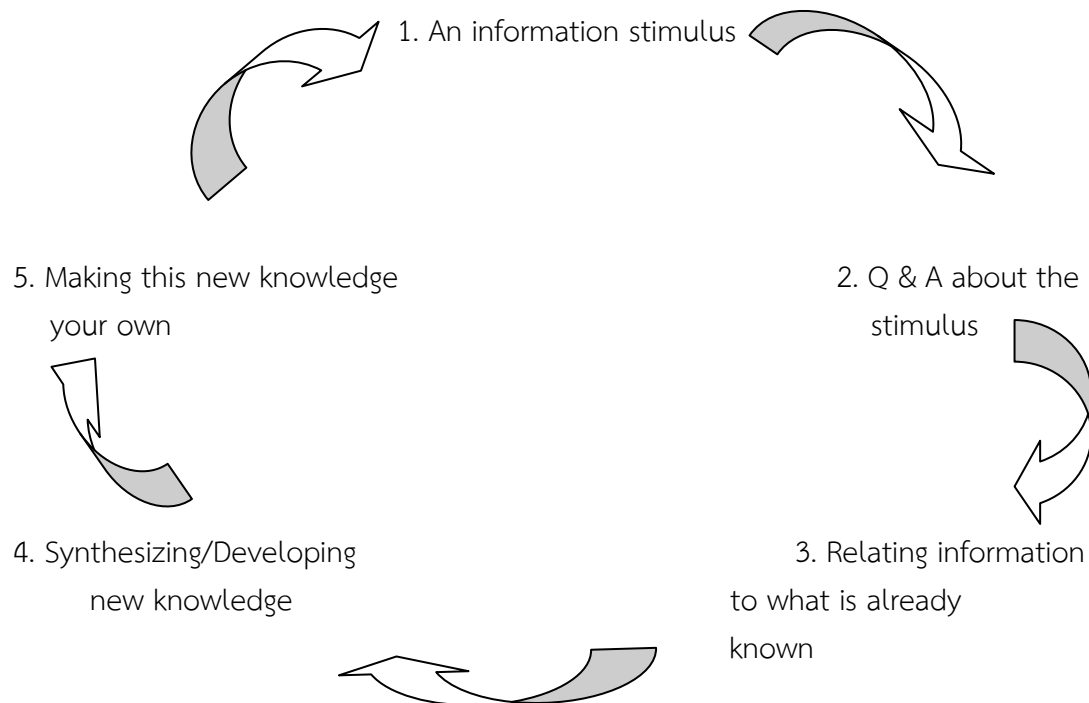


Figure 3. The Jones Model of Learning

1. The learner receives a stimulus in the form of information, from an instructor, text, or other learning resource.

2. The learner questions and analyses this information, and examines it from different perspectives.

3. The learner relates this information to what is already known.

4. The learner synthesizes knowledge from these two steps.

5. The learner makes the knowledge his/her own – and internalizes the knowledge.

The above points seem to be supported by Jonassen's definition of constructivism as being:

"the belief that knowledge is personally constructed from internal representations by individuals using their experience as foundation. Knowledge is based upon individual constructions that

are not tied to any external reality, but rather to the knower's interaction with the external world. Reality is to a degree whatever the knower conceives it to be.” (Jonassen, 1990 : 32)

These steps seem quite reasonable until one thinks about what actually happens in many classrooms around the world. **Step 1**, is ‘a given’ in that all teachers provide information stimuli through their classroom lessons and also from texts. However, in **Step 2**, if students exercise their desire to question and analyze these stimuli, it won’t take long for the teacher to call a halt to this by moving on with the class in order to cover the agenda for that day. However, with Peer Learning, students who are ahead of a particular class can play an active and beneficial role in helping their less informed peers to learn new material.

In **Step 3**, students may also get little encouragement to relate what they are learning to what they already know, because this is not on the curricula for that day’s class. Yet! This is an essential part of the learning process.

In **Step 4**, the student must use the outputs of Steps 2 and 3 to synthesize/develop new knowledge, which reflects the student’s own understanding of the information stimulus after processing it.

Finally, in **Step 5**, the student makes this new knowledge his/her own. That is, they internalize the knowledge and make it their own. If they wish to share this new knowledge with others they may do so, but it will be received by others as information stimuli and not knowledge. For these others to convert it to their ‘own knowledge,’ they too must go through this five Step process.

Further modifications of this Model are seen in Figure 4.

What else can happen? The knowledge acquired and internalized in step 5 can subsequently be used as a stimulus for Step 2 -- Q & A, or for Step 3 -- relating this new knowledge to previously acquired knowledge, thus providing for the synthesis of yet more new knowledge with a second round of Step 4. This new knowledge then moves to Step 5 for further internalization. In this way, it is possible for anyone to create



new knowledge from what they already know by simply using what they know to seek new connections and relationships by Q & A etc. What this means is that we have the capacity to generate a great deal of new knowledge through simple reflection and re-processing what is

already known. This does not necessarily require us to read another text or attend another lecture. This is not to say that such reading or attending lectures may provide useful additional stimuli for our brains to work on.

The Jones Model of Learning

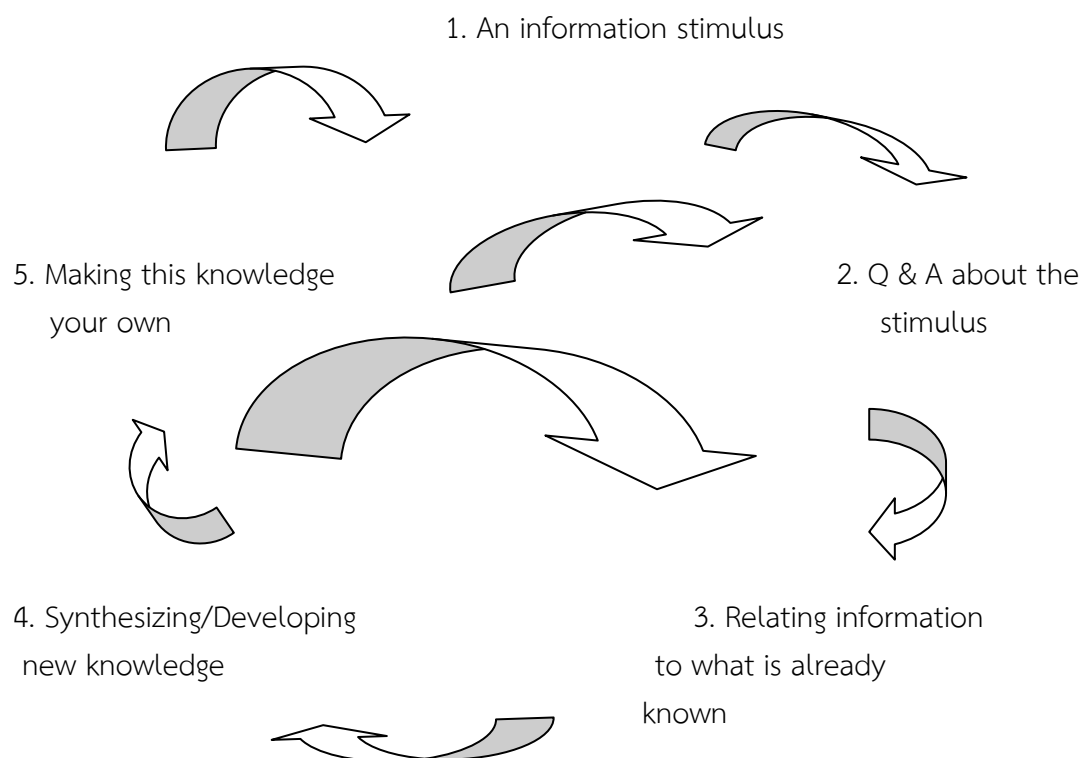


Figure 4. Making New Knowledge from What We Already Know

In the case of manipulative skills learning, the only difference is that in Steps 2 and 3 the learner adds practice for each. In Step 2 -- the practice maybe mere repetition. While in Step 3 -- the practice maybe connected to an already learned skill -- e.g., computer keyboard skills may be related to the skills of playing the piano or a musical keyboard.

Hypermedia & Hypertext

Hypermedia is an enabling rather than a directive environment, offering unusually high levels of learner control. Hypermedia systems allow huge collections of information in a variety of media to be stored in extremely compact form and accessed easily and rapidly. One of the most exciting potentials of hypermedia is the quality of learner control it allows.

Hypertext can facilitate the creation of connections or links within a large body of diverse pictures, facts, or activities; in this way, the learner is actively involved in building the learning environment.

The development and applications of Hypermedia and Hypertext both to formal classroom and informal Education add many new possibilities for both teachers and learners. The main characteristics of hypermedia systems that have great potential for teaching and learning were described twenty years ago by Marchionini (1988, 9). While these descriptions have value today, the developments in this arena have been huge and thus the

opportunities available for teachers and students have also increased.

Hypermedia systems allow huge collections of information and content using a variety of textual, visual and auditory media to be stored in extremely compact form and accessed easily and rapidly by the learner;

Hypermedia offers the learner a very high level of control over their own learning, in contrast to more traditional learning where most of the control lies with the teacher. The focus is on enabling the learner rather than directing them. A significant advantage of Hypermedia is that it offers the user new ways of learning how to learn, as well as learning new content. This facilitates the learners' ability and interest in creating their own learning pathways to mix'n match content and media in different ways to suit their preferred learning styles. In turn, this also provides the learner with many options to choose from by tapping into their higher order thinking skills.

Hypertext facilitates the creation of connections or links within a large body of educational materials or content using pictures, texts, fact sheets, or interactive and other learning activities. The learner can then become actively involved in building their own learning environment and even selecting what content to be included. The learners then take control of their own learning in ways not possible in the past. Structured course material can also be used as in a conventional distance education program, where all material is provided electronically and can be viewed with a browser. Hyperlinks are used to connect text, multimedia parts and exercises in a way that brings new meaning to the learner.

In addition, there are other types of courses that can also use Hypermedia and Hypertext. These include:

- **Video-based courses** are like face-to-face classroom courses, with a lecturer speaking and Powerpoint slides or online examples used for illustration. Video-streaming technologies are used. Students watch the video by means of freeware or plug-ins (e.g. Windows Media Player, RealPlayer).
- **Audio-based courses** are similar but instead of moving pictures only the sound track of the lecturer is provided. Often the course pages are enhanced with a text transcription of the lecture.
- **Animated courses:** Enriching text-oriented or audio-based course material by animations is generally a good way of making the content and its appearance more interesting. Animations are created using Macromedia Flash or similar technologies.
- **Web-supported textbook courses** are based on specific textbooks. Students read and reflect on the chapters by themselves. Review questions, topics for discussion, exercises, case studies, etc. are given chapter-wise on a website and discussed with the lecturer. Class meetings may be held to discuss matters in a chat room, for example.
- **Peer-to-peer courses** are courses taught "on-demand" and without a prepared curriculum. A new field of online education has emerged in 2007 through new online education platforms.

Hypermedia: applications are designed for iterations of greater complexity, where access to information does not follow a hierarchical mode. For example, an extensive database with an intricate system of nodes and links allows the user to look at the same piece of information from different perspectives and contexts. Thus, interaction is of more dynamic form, allowing users to create a sequence of information retrieval more suited to their own knowledge base (Relan, 1991 : 9-10).

Introducing hypermedia may affect fundamental learning patterns in schools and certainly will affect instructional decision-making on the part of teachers.

A further expansion and development of Hypermedia is the use of adaptive hypermedia in formal (or informal) education and training courses and programs in e-learning. Adaptive Hypermedia can also be used by industries, especially in the retail sector through e-commerce to increase sales and profits by adapting to consumers' needs for goods or services. An example of this retail adaptation is Amazon's book recommendations to consumers based on

their purchasing history and interests. Following the lead and work of Al Gore in promoting and emphasizing the importance of e-Government services adaptive hypermedia makes it possible for citizens to get the type of help and assistance they need using a variety of hyperlinks and data sources.

The most popular and advanced hypermedia systems are web-based systems using hypertext.

Edutainment Possibilities

With these advances in the use of Hypermedia and Hypertext combined with the many options to use Hyperlinks within educational content the main limitation on the design and development of new and exciting Edutainment content will be that imposed by the thinking styles of teachers and students. There is no lack of information or Educational content to draw from today. One need only surf the web for any topic and they will get more information than they can possibly digest. Given this wealth of content, the challenge will be how to add Hypermedia and Hypertext to design the content into new and exciting Edutainment Formats

that will make it attractive to to-day's learners. For example, Computers are also changing the face of medicine – in a typical year more than 100 million people go on-line for health and medical information and can visit 23,000 medical websites – this is an example of the power of the individual to engage in their own learning as needed (Pink, 2005).

One caution here is that this task need not be carried out exclusively by the teachers and curriculum designers alone; they should also provide opportunities for the learners to design their own Edutainment content to suit their preferred learning styles. In fact, the very process of doing so will be a tremendous and exciting learning opportunity for the students themselves. By the time they have designed their Edutainment content they will most likely have also learned the Educational content in ways that were never before possible in the classroom.

This reminds the author of a 'teaching' experience with students in Canada back in the late 60's and early 70's when Space travel was capturing the attention of the world's youth and media with the first Moon Landings. This was

long before the availability of the Internet and so students had to rely on their libraries, encyclopedias and other popular magazines and journals for information. As a Science Teacher at a Canadian High School this author decided to teach a segment in his Biology class entitled "The Biomedical Aspects of Space Travel." This was to be a six week segment. He asked students to come to the first three classes on the subject and agreed with them that they would have to submit a project on some aspect of the topic every two weeks. This meant three projects over six weeks. They could work in pairs or small teams. He would propose a set of project topics for them to research and learn about or they could propose a subject themselves, but if they did so, they should discuss it with the teacher first. During the first three classes, he introduced them to the subject and showed them the materials he had gathered and made available for them to use. After these first three classes, he promised to be available at the same time each day in case any student or project team wanted to discuss anything with him. Otherwise, they could spend the time as they wished, in the library, in the cafeteria

or on the school grounds, but they had to submit a project every two weeks by 4.00pm every second Friday. Failure to meet this deadline meant that he would not accept the project and it would be given a zero score.

Not alone were all projects in on time but the quality of the work was far superior to anything he could have given them. The amount of research and learning that went on during the six weeks was impressive and more that he had ever seen from these students before. They designed their own learning to meet their Project's Goals as self created in most cases. If HS students were so capable of doing so almost 40 years ago with such limited resources available to them, how much more capable are they in today's classrooms?

Marchionini (1988 : 9) states that a major problem with this type of (Hypermedia and Hypertext) material is that teachers and instructional designers have to learn how to:

“shape this potential into quality learner control experiences. We want our students to learn to explore information freely and easily, but with purpose and discipline. The privilege of freedom

demands responsibility; the responsibilities of using hyperdocuments include knowing when and how to stay oriented and attentive to goals.”

As an example of a hypertext system, Duffy and Bednar (1991) described one that a student designed as part of their course:

“What is distinct in each of these examples is that there is no pre-specification of content to learn nor any expectation that each learner will take the same thing away from the learning experience. As much as possible the activity that the student engages in is authentic. The role of the instructor is to model and guide. Additionally learner control - the learner's judgements as to what should be done and why - is seen as an integral part of the learning process. In each of these learning environments, it would be strange indeed to consider the nature of the task without learner control. The approach does not preclude guiding The student. Indeed, apprenticeship is central to the pedagogy (1991: 14-15).” The phrase “nor any expectation that each learner will take the same thing away from the learning experience” is consistent with the earlier

points about the Jones Model of Learning where each learner develops their own *unique* knowledge from their learning experience.

Edutainment Design by the Learner and Learning Communities

Learners and learning communities have the capacity today to create their own content and become their own best teachers. This has many possibilities and opportunities for all learners. A challenge to both Educators and eLearners is how best to utilize these social networks to create Learning Networks in cyberspace Examples include:

FaceBook - www.facebook.com/ ,
 UTube - www.UTube.com/ ,
 hi5 - www.hi5.com/ ,
 WAYN - www.wayn.com/waynsplash.html,
 Zorpia - <http://www.zorpia.com/> ,
 PerfSpot - <http://www.perfspot.com/> ,
 Plaxo - <http://www.plaxo.com/> ,
 Flickr - <http://www.flickr.com/> and many others.

To sum up some of the challenges ahead for both eLearners and E-Learning Institutions and Colleges:

1.How will eLearners help to create their own learning content?

2.How will they organize themselves into 'eLearning interest groups' whether

around formal subject content such as Literature, Science, Environmental Studies, or around common interests in such topics as Music, Films, Sports, Hobbies, Games etc?

3.How will they use Hypermedia, Hypertext and Hyperlinks to create their own exciting Edutainment?

4..How can E-Learning Institutions and Colleges best utilize these social network websites or create new Virtual Learning Community websites to facilitate their students' learning?

5.How can Course or Program content be designed to avail of these websites?

Summary

This Paper has attempted to introduce the reader to the notion of a marriage between Education and Entertainment to create what is called Edutainment. The sheer growth of E-Learning and the application of new and evolving developments in ICT and MCE devices create many new possibilities and opportunities for the growth of Edutainment. It is argued that these Edutainment developments will greatly assist students to increase and improve their own learning to meet their needs and challenges in the 21st century,



while also forcing Traditional Education to move away from its belief that the ‘Teacher knows best,’ when there is a wealth of evidence to the contrary.

A brief discussion was presented on the importance of moving more to demand style Student Centered Learning and away from supply style Teacher Centered Education. The issues of Teacher vs Learner Control of Education was presented, and the case for greater Learner Control was made.

A clear distinction is made between Information and Knowledge, pointing out that until and unless Information is

processed by the learner’s brain it cannot be converted to new Knowledge, which will then be *unique* to the learner. The ‘Jones Model of Learning’ is presented to illustrate how this is done under the control of each learner.

The rapid growth in Hypermedia and Hypertext was discussed together with the possibilities these have for the design of new Edutainment content for today’s students. Finally, with the rapid growth of social websites and new and powerful cyber connectivity sites emerging on the Internet, these present new challenges and opportunities for the creation of new Edutainment Designed materials.

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Biographical Summary for Dr. A. Noel Jones

Dr Noel Jones began his career in Education in 1967, where he did Teacher Training and taught High School in Ireland, Canada and Sierra Leone, W Africa, and later worked with the Irish Industrial Training Authority, before becoming an International Business & Management consultant, throughout Europe, Africa, the Caribbean, Middle East and N. America. Over a period of 14 years from 1987, Dr Jones worked as a staff member at the International Monetary Fund HQ in Washington - responsible for Management and Organization Development, and at the World Bank HQ where he specialized in Strategic Planning and Organizational Change. Later as a consultant, he worked on World Bank funded Projects throughout the world. His consulting experience extends across the Public & Private Sector, in Infrastructure, Health, Education, and Environment. He has designed and facilitated four Multilateral Development Bank Conferences on Organizational Change in Washington, Paris, Abidjan and Manila.

Dr. Jones is a Visiting Professor at Kasem Bundit University Graduate Business School in Bangkok, Thailand, where he has been a visiting faculty member for the past three years. He is also currently a Visiting Professor at Stamford International University and Assumption University in Bangkok, Thailand and at the National Economics University in Hanoi, Vietnam. He was also a Visiting Professor at the Austrian Joint Vienna Institute, between 1993 and 2004 where he worked with Government officials from 32 Transition Economy Countries stretching between E. Europe, Russia, and Central Asia (CIS) to China, Mongolia and Vietnam.

Dr. Jones has degrees in Biology, International Development, Management and Psychology, and has published books and articles in the fields of Economic Development, Management, Psychology, Education, and ICT. He is a regular contributor to International Conferences.