PEDAGOGY REDEFINED: FRAMEWORKS OF LEARNING APPROACHES PREVALENT IN THE CURRENT DIGITAL INFORMATION AGE

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ABSTRACT

This paper attempts to delineate the frameworks of learner-centered vis-à-vis teacher-centered processes of learning prevalent in the second decade of the twenty-first century. It defines the pedagogical changes that have emerged due tothe development of delivery technologies, and the interrelations among teachers, students, and knowledge. The paper clarifies the following frameworks of learning approaches: learner-centered yet teacher-determined pre-web pedagogy, the multi-directed web 1.0 learning (andragogy), the learner-determined web 2.0 learning (heutagogy), and the network-directed web 3.0 learning (paragogy). The difference between the pedagogy and andragogy paradigms is succinctly that the first is child-centered, while the second is adult-centered. The difference between the heutagogy and paragogy paradigms is a matter of degree of maturity and autonomy, as well as self-direction versus instructor-control. Paragogy requires more autonomy and self-direction. A study conducted at Philadelphia University-Jordan, revealed that 62% of faculty members surveyed considered themselves performing the role of andragogy (Teacher Multi-directed Adult Learning paradigm), 21% appeared to perform that of the pedagogy paradigm (pre-web or Teacher Uni-directed Student Learning paradigm), while 12% said that they perform the role of heutagogy (Self-directed Learning paradigm), and 5% that of paragogy (Network-directed Learning paradigm). This paper also tries to outline the basic theories of connectedness and collaboration, as well as the four stages of development of the learning processes, ranging from pre-web learning styles (comprising traditional, radio learning. Video books, and computer–assisted learning styles), web 1.0 (including electronic and blended learning styles), web 2.0 (making mobile and ubiquitous learning styles possible), and web 3.0 (facilitating the pervasive learning style). It describes the impact of new social software technologies upon teacher-knowledge, learner-knowledge, teacher–learner relations, and social networking. The main contribution of this paper is one of awareness that the traditional role of faculty members operating in pre-web content-based situations has become obsolete and improper. It clarifies the frameworks of self-determined life-long learning that made educational institutions redefine the packages of services they offer, and procure the infrastructure required to perform their duties in the current digital age. Redefinition of pedagogy to meet requirements of the twenty-first century students seems to be a must, and should form an integral part of any professional training program designed for university faculty members.

Keywords: Pedagogy, Andragogy, Heutagogy, Paragogy; Social Media, Connectedness, Interrelatedness, Collaboration, Social Networking, Edutainment, Scaffolding, Self-Directed Learning, ubiquitous Learning, Pervasive Learning, Learning Society, Scaffolding.

INTRODUCTION

All edutainment strategies generally concentrate upon applying suitable learning technologies that match the learners' styles of learning to achieve intended objectives. Such strategies can be redefined according to the impact of the spectrum of software networking technologies that generally impose three dimensional approaches: didactic processing that governs teacher-knowledge relations; the learning strategies that regulate learner-knowledge relations; and pedagogic relations that rule teacher–

learner interaction.

All modes of instruction that suit learning styles in the second decade of the twenty-first century are governed by social software networking technologies that allow the construction of new social ways of collaboration, such as communication, social networking, file and image sharing, blogs, and collaborative authoring. Styles of learning are generally governed by interactivity, collaboration, learning society, and networking facilitated by the world-wide web.

From a knowledge-oriented perspective, a framework of learning encompassing learning to be, to know, to do, and to live together prevails in the twenty-first century. The learner tries to transform pieces of information into new experiences with personal meaning by applying such information in new real or simulated situations.

From an information-transmission delivery-based perspective, modes of instruction vary according to objectives targeted. Learning forms of interaction vary according to the dimensions of access to knowledge and social interaction included. Hence the need for a long-life type of learning that utilizes modern communication technologies both inside and outside the classroom.

Exposition of the impact of technological affordance and new pedagogical approaches on the potentials of learning is an indicator of the extent to which such technologies help in establishing an interactive learning society twenty four hours a day seven days a week, instead of the limited class hours in traditional education. Therefore, we have web 1.0, web 2.0 and web 3.0 edutainment.

Problems Tackled

The paper tries to probe the impact of new technological affordance and pedagogical approaches on the potentials of multi-channel learning. It tackles the following five questions.

- What is the impact, if any, of technological affordance on the process of learning?
- What are the potentials of learning theories currently in use?
- What is the typology of interaction theory?
- What frameworks of learning approaches prevail in the second decade of the twenty-first century: pedagogy, andragogy (Edutainment web 1.0), heutagogy (Edutainment web 2.0), or paragogy (Edutainment web 3.0)?
- What are the factors that made heutagogy and paragogy emerge to take the place of pedagogy and andragogy?

Importance of the Study

Awareness of the impact of new technological affordance on pedagogical approaches, as well as the frameworks of learning approaches and their distinguishing characteristics make educational institutions redefine the packages of services offered, procure the infrastructure required for the provision of such types of edutainment, and even seek contracting with outside vendors to perform some of the processes required. In micro-education, faculty members should publish or perish. In like manner and from a macro-education perspective, schools and universities should adapt and cherish practices that meet contemporary learning needs, or else perish and be subject to de-schooling. Society should adopt new networks and services which give the learner identical opportunities to share identical drives, motives and concerns with peers.

Impact of Technological Affordance on the Process of Learning: Paradigms of Change

Technological devices used as media of learning include desktop and laptop computers, mobile phones, e-books, smart phones, and other devices. Learners can choose the convenient visual, audible, and printed contents. Among the collaboration technologies currently used, mention can be made of such networks as e-mail, instant messaging, discussion chat-rooms, web-conferencing, network building tools, and weblogs. As ubiquitous as the telephone, e-mail has become the primary messaging technology of modern interaction. Instant messaging has taken the desired immediacy of the e-mail. Its format represents one-to-one, multiple and group conversational behavior. Discussion chat-rooms develop structured websites where individuals can ask and respond to questions posed. Web-conferencing allows individuals and groups to collaborate over distance. The spectrum of modern devices and social network technologies that serve as agents of social media can be summed up and

modified as shown in Figure 1 (Siemens, 2011).

Utilization of the computer, Internet, mobile phone, palmtop, and other information and communication technologies cannot produce a well-informed and highly trained generation by themselves. However, instructional design, social media, and scaffolding form the basic requirements for the feasibility of adopting the edutainment web 2.0 (heutagogy) paradigm within educational practices.

Responses to a questionnaire conducted at Philadelphia University/Jordan in 2012 revealed that the social software that are expected to prevail in Jordan up to 2017 are Facebook, LinkedIn, Twitter, Moodle, and Blackboard. Philadelphia faculty members rated the importance of new social networking technologies that are currently being utilized, or are projected to be in use within the coming five years, as follows: online courses (82%), social networks (76%), text messagingnotifications (74%), blogs (60%), wikis (70%), software collaboration (70%), video podcasts (64%), document management (60%), mashups (58%), REID/ sensor networks (52%) (AlFuqaha, 2012).

They also estimated the projected effect of utilizing new technologies on the nature of programs and the modes of instruction as follows (AlFuqaha, 2012):

- Semester university system is expected to be no more adopted due to the varied lengths of modules (60.5%).
- University requirements will vary (60%).
- Increasing opportunities of collaboration between universities and industry and service institutions will increase enrollment of technicians in university programs for certification (59.1%).
- Interdisciplinary programs are likely to increase in number (57%).
- Collaboration among universities in delivery of modules will increase (54.4%).
- Feasibility of student's enrollment in diverse universities to cover the components of a program (52.1%).
- Dynamic delivery of modules to facilitate personalized instruction (52%).
- increase of collaboration between universities and industry (46%).
- Feasibility of tailoring programs according to student preferences (38.5%).

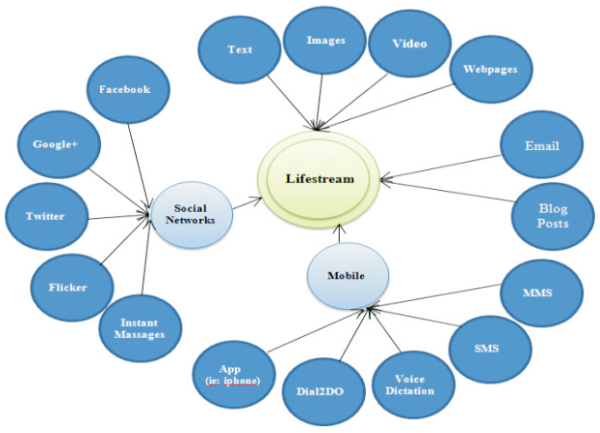

Figure 1. Array of Devices and Technologies Used as Agents of Social Media

For this paper, a survey conducted at Philadelphia University, Jordan in 2013, with a random sample of 42 faculty members, revealed that faculty members surveyed considered themselves as performing the roles shown in Table 1.

If the concept of learning approaches is adequately understood by respondents, the majority seem to be of the andragogy (Edutainment web 1.0) style working in educational institutions that are characterized by the following traits (Smith & Dillon, 1999, p.29): disregard of the limitations of time and space, staff-members are not necessarily located in one place, affordance of all technical infrastructure needed, and efficacy ensured as all efforts are directed towards more pre-determined objectives.

This view stresses the multi-media information–transmission aspect of the learning and teaching processes. But learning is a social activity that needs social media to form

	Learning Paradigm	#	%
-	Pedagogy (Performing Teacher Uni-directed Student Learning) – Pre-web Edutainment	9	21%
-	Andragogy (Performing Teacher Multi-directed Adult Learning) – Web 1.0 Edutainment	26	62%
-	Heutagogy (Performing Self-directed Learning) - Web 2.0 Edutainment	5	12%
-	Paragogy (Performing Network-directed Learning) - Web 3.0 Edutainment	2	5%

Table 1. Learning Paradigms Adopted by the Sample Faculty Members

a multi-channel connection and collaboration with other learners beyond the boundaries of class, enabling learners to gather information anytime and anywhere. Social Media (Web 2.0) calls for new forms of pedagogy, such as the edutainment web 2.0 (heutagogy) paradigm, which is the pedagogy of nearness and connectedness, and the edutainment web 3.0 (paragogy) paradigm which is an extension of heutagogy that implies self-determined learning in which the learner decides what and how learning should take place (Anderson, 2010).

Figure 2 clarifies the relation between social media, VLE and online forum, on the one hand, and formal, informal, and virtual collaboration on the other (Wheeler, 2011).

The concept of self-management has been shifted from the educational institution to the individual instructor or learner. The traditional role of the instructor operating in situations of content-based curriculum has become to be considered as obsolete and improper. Through the Internet, palmtops, mobile phones, and other tools of communication that provide large opportunities for interaction in an increasingly diversified community, students learn more effectively beyond the classroom. The concept of "instructor" should evolve into a "facilitator of learning" instead. The most radical alternative to school and university is a network or interrelatedness service which gives each individual learner the same opportunity to share his concerns with others motivated by identical drives and concerns.

Typology of Interaction Theory

Change from Class Communication to Learning Society

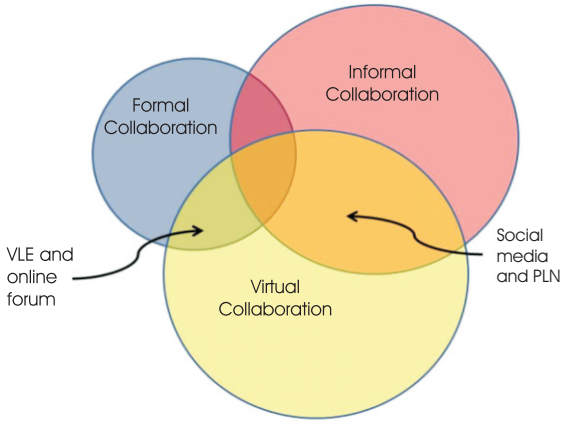

Figure 2. Social Media and Types of Collaboration

Technology paves the way for major changes in classrooms, teaching-learning strategies, and the relationships among knowledge, instructors and learners who are mostly interactive in the modern world. Computer-based off-campus type of education is already replacing the traditional campus-based learning. Simulations and visualization tools facilitate bridging experiences and abstractions aiming at effective learning of complicated content and challenging experiences. That is based upon the assumption that human beings usually retain about (20%) of what they see, (30%) of what they hear, (50%) of what they see and hear, and up to (80%) of what they simultaneously see, hear, do, and probably smell through such a software like Google nose (Dede, 1995). So learning a certain skill would ideally include practicing it in a real or simulated situation, with consultation and correction being provided by a supervising expert.

Simulations require the interactivity of the learner who can participate in the simulated world as an actual partner. One of the aims of distant learning is to help learners become capable of distance interaction. Skills involving information-gathering from remote sources, and collaborating with dispersed team members, are considered essential in the information age, just as learning to perform tasks quickly was critical in the industrial revolution era (Dede & Palumbo, 1991, p. 29).

Social interaction is important for the cognitive development of the individual. According to the social cognitive theory of learning, language and concept formation result from the active relationships among society members. Learning is based on interpersonal relationships, coaching, modeling, and imitation. In collaborative learning, considered as a prioritized conceptual framework of web-based instructional environment, learners are placed in work-groups, called learning societies or communities, to solve problems through conversation and negotiation. This of course involves sharing and valuing the perspectives of others, social interaction, negotiation, and conversation. The experiences involved are considered as common projects to which all are accountable for success or failure. They may include the process of scaffolding, in which learners use expert knowledge to build upon their individual schema. Thus, members of a learning society are trained to

adopt interdependency. Learners bring knowledge, experiences, and values to the learning society. Instruction is designed to incorporate the existing knowledge base, and to encourage learners to use it. Social interaction is a major requirement in the learning process, as learners become members of a learning society that makes them share mental models with peers and experts participating in the learning society (Brown, 1994, p.10).

Change in the Typology of the Theory of Interactivity

Teacher-learner, learner-learner, and learner-content forms of interaction are common to both traditional and computer-assisted learning. But three other effective forms should be considered for exploitation by faculty in learning environments: teacher-teacher interaction, which implies the potentiality of participation in professional as well as social networking; teacher-content interaction, that indicates the process faculty members undergo while developing and applying the learning content; and content-content interaction, denoting "the ability of learning resources to interact, update and improve without the direct intervention of humans.

The interrelations among teacher, learner, and knowledge have been redefined, as exhibited in this article, as shown in Figures (3,4), elaborated from a basic one, through specifying the forms of web learning, types of learners, and psychologies of training (Baldazzi, Ricci and Baroz (eds), 2011, pp. 143-144).

Due to the importance of social software in such an interrelation, the dimension of "Group" that denotes social networking can be added as illustrated in Figure 4.

Potentials of Learning Theories for a Digital Age:

Shift from Entrainment and Infotainment to Edutainment

All forms of learning can be classified into three categories: entrainment, infotainment, and edutainment. The first means obtaining training, the second is construed as attaining information, and the third is about achieving the affective objectives of education. Entrainment is still of high importance in modern society, and can be achieved through apprenticeship, face-to-face, as well as distance education. Infotainment and edutainment are considered the basic duties of educational institutions: infotainment is the main aim of traditional institutions, while edutainment is the category prevalent in the first decade of the twenty-first century.

Entrainment and infotainment are teacher-centered and employ new technologies as teaching aids. Edutainment, on the other hand, is learner-centered, and uses technologies to facilitate self-directed experiential learning. Hence, edutainment is the process of self-managed learning that suits distance learning strategies. The three forms of learning tackle learning experiences no matter what the role of teacher will be. Stressing the teaching or learning processes leads to distinguish the paradigms of pedagogy, andragogy (edutainment web 1.0), heutagogy (edutainment web 2.0), and paragogy (edutainment web 3.0) according to the degree of instructor control, learner-centeredness, and course

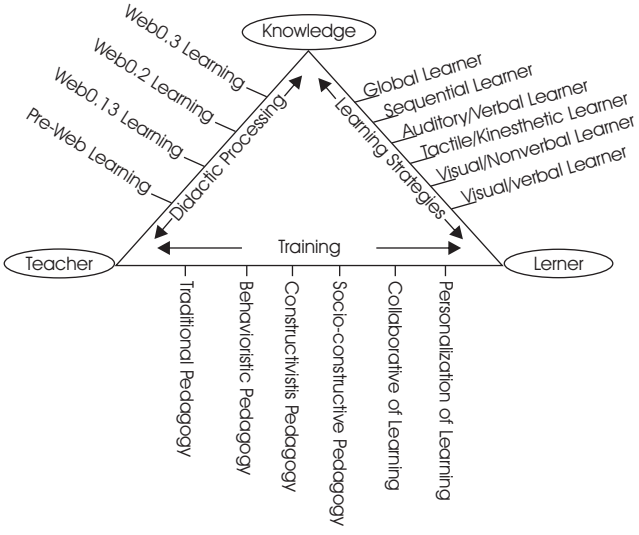

Figure 3. Interrelations Among Teacher, Student and Knowledge

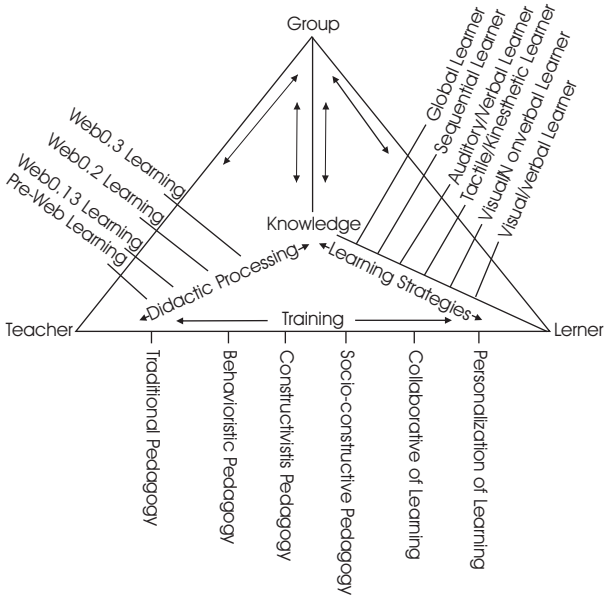

Figure 4. Group Dimension Added to the Forms of Interrelation

structuring.

Is the Theory of Connectedness Appropriate in the Digital Age?

The theory of connectedness or interrelatedness emphasizes the role of the social and cultural context. It advocates the assumption that information is distributed through a network of connections. Hence, learning can be construed as the ability to construct and traverse those networks. Central to this theory is the relationship between work experiences, learning, and knowledge. This theory considers learning as the process of elaborating a network that facilitates understanding where to obtain the information needed, in order to support information transmission from a delivery-based perspective. Four key principles of learning are highlighted by the connectedness theory, namely.

- Autonomy: An autonomous individual is committed to self-actualization and natural enfoldment, self-directedness, and self-expression (Aviram& Assor, 2010, p. 118);
- Connectedness / Interactivity: Connectedness is a form of experiential learning which gives priority to connections formed by actions and experiences. In networked learning, the principles of connectedness and interactivity comprise personal connections, caring, and belonging. According to interactivity, learning is the ability to construct and traverse connections (Siemens, 2011);
- Diversity: Connectedness supports choosing appopriate tools for expression, where learners can be attracted towards the more competent (Anderson, 2010);
- Openness: Learners should be able to share resources, ideas and expertise, and communicate new information and insights through networks (Downes, 2007).

According to connectedness terms and assumptions, learning is considered as a network phenomenon that is influenced and enhanced by interrelatedness and technology. Such an outlook to learning seems proper in the digital age that characterizes the current epoch.

Prevailing Frameworks of Learning Approaches

Change from E- Learning to Ubiquitous, Pervasive and Multi-Channel Learning

Learning techniques in the modern world can be highly effective when integrated by computer-based learning systems, or by any other modern means of communication. There should be a large deal of interactivity to achieve compatibility with the collaborative, generative, and case-based learning types of the majority of learners in the second decade of the third millennium.

Table 2 illustrates the development stages of learning technologies (pre-web, web 1.0, web 2.0, web 3.0), the types of learning processes (traditional, R-learning, T-learning, E-learning, M-learning& P-learning), learning time or "know when" (during class, broadcasting, connection,

Learning Stage	Learning Type	Learning Time	Stakeholders Involved	Synchrony
Pre-Web Learning	Traditional	During Classes	Teacher –StudentOne-to-One Learning (Human stakeholders)	Synchronous
	R-Learning (Radio Learning) & Audio Books	During Broadcasting& Listening		
	T-Learning (Television Learning)	During Broadcasting		
	C-A-Learning (Computer Assisted Learning)	During Browsing		
Web1.0 Learning	E-Learning (Electronic Learning)	During Connection	Teacher –Student One-to-Many (Human stakeholders)	Asynchronous
	Blended Learning	During Browsing & Connection		Blended Synchronous & Asynchronous
Web2.0 Learning	M-Learning (Mobile Learning)	During Dialing	Teacher -Student Many –to-Many logging (Human stakeholders)	Blended Synchronous & Asynchronous
	U-Learning (Ubiquitous Learning) Social Networking	All in One		
Web3.0 Learning	P-Learning (Pervasive Learning)	All in One	Many –to-Many (Human stakeholders & Devices)	Blended Synchronous & Asynchronous

Table 2. Stages of Development of Learning Technologies

browsing& dialing), stakeholders involved (one-to-one, one –to-many&many-to-many), and synchrony (Synchronous & Asynchronous).

Change from Pedagogy to New Frameworks of Learning Approaches

From a conceptual point of view, the pedagogy paradigm is typically teacher-centered edutainment, and refers to how the instructor facilitates the learning process, and designs activities and content, as opposed to what the learners do or what they bring to the learning environment (Beich, 2008). The andragogy (Web 1.0 edutainment) paradigm, on the other hand, is learner-centered, and focuses on learners' intrinsic desire to create knowledge. It is about adult learning that is based upon understanding the motivations behind learning. Andragogy includes problem-centered rather than content-centered edutainment; learners' experiences or prior knowledge, experiential learning or reflection, a partnership between the learner and the instructor, self-directed focus, and a need to know why one needs to learn a definite piece of information.

The heutagogy (Web 2.0 edutainment) paradigm means 'self-directed or self-determined learning'. It is learner-centered too, and involves experiential learning to stimulate meaning, promotes the concept of self-determined holistic learning through critical reflection, and involves encouraging learners to become deeply reflective while developing their abilities. Experiential learning focuses upon helping learners understand how experiences affect their values, beliefs, goals, habits, conceptual frameworks, and previously held ideals, and to contemplate ways in which the learners might expand their self efficacy in these areas. Paragogy (Web 3.0 edutainment) means peer-to-peer learning, where students support each other's learning on an equal basis. It is highly applicable when the advance of learning technologies and the deep pervasion of social media into many learning spaces, formal and informal, are taken into consideration. A more informal synonym is "peertagogy".

The image shown in Figure 5 clarifies the difference between the paradigms of pedagogy and andragogy. In pedagogy, learning is uni-directional, from the source of knowledge (the instructor) to the pupil. In andragogy, learning is multidirectional, between the more

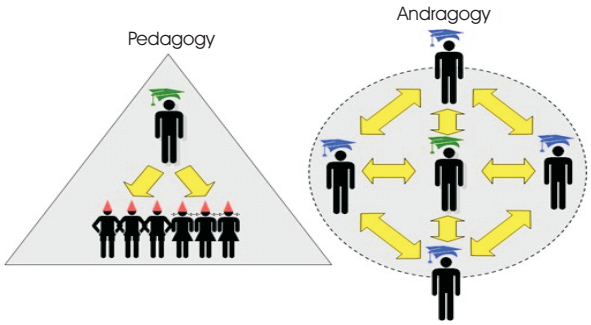

Figure 5. The Difference between Pedagogy and Andragogy (Image Source: http://elearningpractitioner.wordpress.com/?s=andragogy)

knowledgeable facilitator and the less knowledgeable, but not ignorant, learner (Knowles, 1975, p. 7).

The theory of paragogy is developed to take the opposite side of "andragogy". It seems to be an elaboration of the concept of scaffolding, where knowledgeable instructors and peers can create learning societies or groups in which learners can learn more when they work on their own. Paragogy takes scaffolding farther, because the relation among peers is characterized by being equal. The exchange conditions are duplex - that is, they work both ways and reciprocal learning is achieved as learners connect with each other, share their ideas, and engage in dialogue. If this sounds familiar, it is exactly what happens informally day in, day out on face-book, twitter and other social networking sites. Paragogy excels andragogy in finding more synergy with emerging explanatory frameworks of digital age learning such as connectedness (Downes, 2007).

Distinction is made by assuming that andragogy focuses upon adult learners, whereas pedagogy is related to the education of children. Pedagogy and andragogy are student-centered yet teacher-determined, whereas heutagogy and paragogy are learner-determined. In heutagogy and paragogy, self-directed learners take the initiative in outlining their learning needs and formulating learning goals with or without the help of others. **Factors** *Affecting Change from Teacher Uni-Directed to Network-Directed Learning*

According to maturity and degree of autonomy or self-direction of learners versus instructor control and course structure required, the shift from pedagogy and andragogy to heutagogy and paragogy can be clarified as shown in Figure 6.

Scaffolding means breaking up the content of learning into pieces, and then providing a tool or structure with each piece. There are six well-known scaffolding strategies that can be used with learners: show and tell, tap into prior knowledge, give time to talk, pre-teach vocabulary, use visual aids, and pause, then ask questions, pause and review. In order to scaffold a lesson appropriately, and differentiate methods of instruction, the "paragogue" or teacher has to understand the individual learner and collective zone of proximal development of learners.

Among the defining principles of self-directed and auto-didacticparagogy, mention can be made of the following:

- Everyone has a mixture of "self-directed" and "other-directed" behaviors. A self-concept may be less important than the concept of "shared context in motion".
- Paragogy views people as lacking in their knowledge of learning how to learn.
- Paragogy views one as being able to learn from anyone else, and people who learn from one another are "peers".
- Learning can come from many different sources. Part of paragogy is learning how to work one's way around a given learning space, formal and informal, using social media.
- Satisfying a drive is as important as its existence in the first place. Paragogy is the art of motivation and satisfying drives whenever possible.

According to locus of control, the four frameworks of instructional design developed until now can be summed up in the order shown in Figure7.

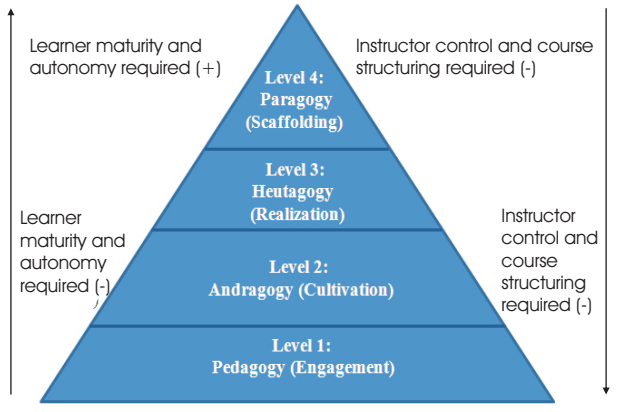

Figure 6: The Continuum from Pedagogy to Paragogy
(Adopted and Adapted from a design by Canning, 2010, p.63)

Conclusions. Implications and Reflections on the Future of Edutainment

According to the impact of the spectrum of technologies that impose new approaches of information-transmission in the current digital age, teacher-determined and self-determined life-long learning can be redefined within four frameworks: didactic processing, distinguishing features in learning strategies, discrepancies among pedagogic relations, and roles of teacher and student in the teaching/learning processes. Such frameworks are depicted as being the impact of development of learning technologies and pedagogical approaches on the potentials of scaffolding and multi-channel learning. This forms an outline of the answer to the first question of the problem of the study concerning the impact of technological affordance on the process of learning,

As for the potentials of learning theories currently in use, which is the pivot of the second question, the evolution of education technologies resulted is shown in Figure 8.

As for the typology of the interaction theory tackled in the third question under study, the paper elucidates that the principles of autonomy, connectedness, diversity, and openness form bases for the network phenomenon influenced and enhanced by interrelatedness and learning technologies. Such an outlook to learning seems appropriate for the current digital age.

In respect of the fourth question concerning the frameworks of learning approaches prevailing in the second decade of the twenty-first century, the paper clarifies that in light of recent developments in new teaching methods and media, pedagogy and web 1.0 (andragogy) theories seem outdated. The concepts of

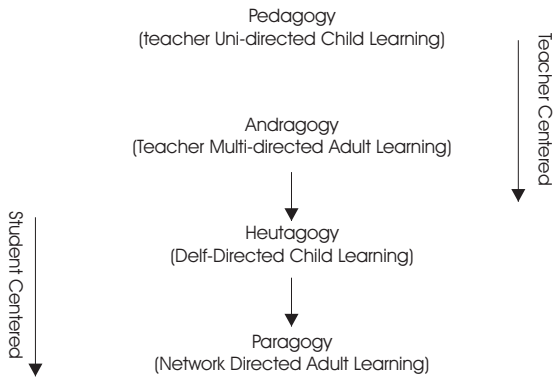

Figure 7. The Four Frameworks of Instructional Design

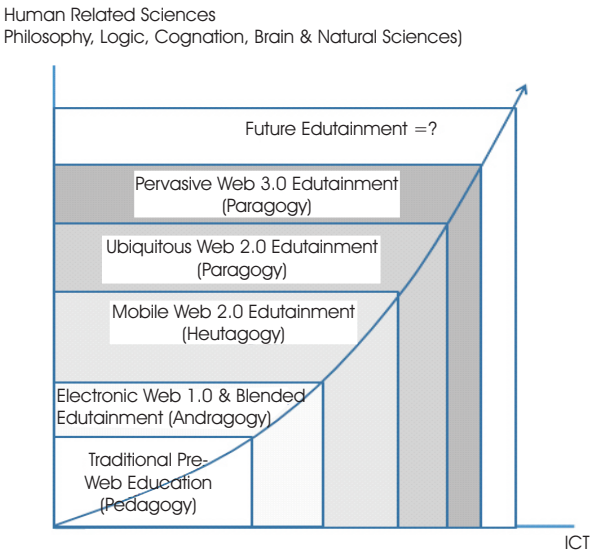

Figure 8. Evolution of Education Technologies

pedagogy and andragogy are conceptually inter-linked, with andragogy focusing upon adult education whereas pedagogy concentrates upon the education of children. Both web 2.0 (heutagogy) and web 3.0 (paragogy) constitute more appropriate ways of framing learning in the digital age.

As regards the fifth question exploring the factors that made the heutagogy and paragogy paradigms emerge as developing forms of pedagogy and andragogy, it seems evident that Web 2.0 facilitated blended synchronous and asynchronous mobile and ubiquitous learning, while web 3.0 technologies paved the way for pervasive learning.

In 2012, a random sample of faculty members at Philadelphia University, Jordan rated themselves as mainly adopting the framework of web 1.0 teacher-centered multi-directed adult learning (andragogy). This indicates that they work within the synchronous pre-web and electronic learning concepts, far away from the asynchronous web 2.0 and web 3.0 learning stages advocating self-directed and network-directed learning that suit best students in the digital age.

In general, the paper forms a contribution to an awareness campaign calling to redefine the frameworks of learning approaches in the digital age. Educational institutions should redefine the packages of services offered, and procure the infrastructure required to perform their duties in the current age. Such a redefinition of pedagogy seems to be a must. It should be an integral part of all strategy plans, and a basic part of any professional training program designed for university faculty members.

What will come next as a result of rapid technological advancements, beyond the asynchronous paradigms of the auto-didactic mobile and ubiquitous web 2.0 learning (heutagogy) and the pervasive web 3.0 learning (paragogy), no one can easily predict.

References

[1]. AlFuqaha, Isam (2012). Blended Learning Environments in Arab Universities: Probing Current Status and Projecting Future Directions, *Conference on e-learning and Blended Learning: A Strategic Choice in Arab Universities*, Philadelphia University, Jordan.

[2]. Anderson, T. (2010). Theories for Learning with Emerging Technologies. In G. Veletsianos (Ed.), *Emerging Technologies in Distance Education.* Edmonton: Athabasca University Press.Retrieved fromhttp://www. Aupress.ca/ books/ 120177 /ebook/02_Veletsianos_2010-Emerging_ Technologies_ in_Distance_Education.pdf

[3]. Aviram, A., & Assor, A. (2010). In Defense of Personal Autonomy as a Fundamental Educational Aim in Liberal Democracies: A Response to Hand. *Oxford Review of Education,* 36(1), 111-126.

[4]. Baldazzi A., Ricci L. and Baroz V. (eds) (2011). *E-Learning Quality Assurance: A Multi-Perspective Approach,* Gangemi Editore spa, Roma, Italy, ISBN 978-88-492-2259-3.

[5]. Beich, E. (2008). *ASTD Handbook for Workplace Learning Professionals.* Alexandria, VA: ASTD Press.

[6]. Brown, A. L. (1994). The Advancement of Learning. *Educational Researcher,* 23 (8), pp.4-12.

[7]. Canning, N. (2010). Playing with Heutagogy: Exploring Strategies to Empower Mature Learners in Higher Education. *Journal of Further and Higher Education,* 34(1), 59-71.

[8]. Dede, Chris. (1995). The Transformation of Distance Education to Distributed Learning. Http://www.hbg.psu.edu/ bsed/intro/docs/distlearn.

[9]. Dede, C. and Palumbo, D. (1991). Implications of hypermedia for cognition and communication. *Impact Assessment Bulletin,* 9,1-2.

[10]. Downes, S. (2007). *What Connectivism* Is. Retrieved from 1. Http://halfanhour.blogspot.com/2007/02/what-connectivism-is.html

[11]. Knowles, M.(1975). *Self-Directed Learning: A Guide*

for Learners and Teachers. United States of America: Cambridge Adult Education.

[12]. **Siemens, G. (2011).** *Moving Beyond Self-Directed Learning: Network-Directed Learning.* Retrieved from http://www.connectivism.ca/?p=307

[13]. **Smith, P. & Dillon, C.L. (1999).** "Comparing Distance Learning and Classroom Learning: Conceptual Considerations". *The American Journal of Distance Education,* 13, No. 2:6.

[14]. **Wheeler, S. (2011).** *Learning with e's: Digital Age Learning.* [Blog post] Retrieved from http://steve-wheeler.blogspot.com/2011/07/digital-age-learning.html

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