

OMDE 601 9041 GROUP 2

FIRST WAVE OF DISTANCE EDUCATION DEVELOPMENT (1840s- 1970s)

The Development Waves of Distance Education

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3.1.2015

1	2	3	4	5	6
Larger Context (economics/ politics/ societal values and pressures/ government policies/ technological advances)	Theories/ Ways of Understanding	Institutional and Organizational Developments/ System	Teaching/ Learning Methodologies (role of teacher/role of learner)	Predominant Technologies	Key Authors
<p>The Industrialized societies identified the need to expand education broadly.</p> <p>Division of labour.</p> <p>Government helped to drive processes.</p> <p>Centralization issues.</p> <p>Access for citizens.</p>	<p>Behaviorist Learning Theories-</p> <p>Pattison (1999) describes educators who create an atmosphere where desirable behaviors are positively reinforced and undesirable</p>	<p>Correspondence Schools were set up to address the challenge of missing school during world wars (Haughey, 2010).</p> <p>University of London (1836) (Holmberg, 2005, p. 14).</p>	<p>Separation between teacher and learner.</p> <p>Physical separation.</p> <p>Time separation.</p> <p>Social separation.</p> <p>Learners merely had to consume</p>	<p>Largely print based.</p> <p>Industrialization brought with it developments in printing technologies.</p> <p>Mass production of information via emerging print industry.</p>	<p>Caleb Phillips</p> <p>A.E. Tickner</p> <p>W. Harper</p> <p>H.S. Hermod</p> <p>C. Wedemeyer</p> <p>Toussaint, C.</p> <p>Forester, T. J.</p>

<p>Demand driven by the citizens.</p> <p>Upward social mobility (the class system).</p> <p>Geographical differences / conflicts / discrimination / marginalization could have denied access to some in certain societies.</p> <p>Gender discrimination in some societies meant that female students could not attend public or private schooling.</p> <p>World wars also took the focus away from public schooling and caused massive lag in education during warring years.</p> <p>Access to education became an overriding concern in many countries.</p>	<p>behaviors are negatively reinforced.</p> <p>Positivism: Focus on independent learning.</p> <p>Industrialized model.</p> <p>Empathy approach & didactic conversation: the presentation of the course subject in a conversational style (Holmberg, 2005, p.23).</p> <p>Rustin Approach: revolves around the creation and handing out self-instructional material (Holmberg,</p>	<p>University of Chicago (1892) (Holmberg, 2005, p. 15).</p> <p>International Correspondence Schools (ICS) in Scranton, PA later became the Harcourt Learning Direct (Holmberg, 2005, p. 16).</p> <p>University of Queensland (Holmberg, 2005, p. 16).</p>	<p>the information provided.</p> <p>Supervised correspondence education for primary and secondary students and began in Australia in the early 20th century (Holmberg, 2005, p. 16).</p>		<p>Childs, G. B.</p> <p>O . Peters</p> <p>Daniels, J. S.</p> <p>Delling, R. M.</p> <p>Dinsdale, W. A.</p> <p>Gadden, G.</p> <p>Holmberg, B.</p> <p>Keegan, D.</p>
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<p>Combine study and work. Learners/ students no longer required to leave places of work and study full time. This could be done simultaneously</p> <p>Minimize costs of education. No travelling required as students could do this at the comfort of their own homes.</p> <p>Home study as referred to by for profit organisations and “ independent study” as referred by universities (Moore & Kearsley, 2012 p. 23).</p> <p>Giving access to those unprovided for otherwise.</p> <p>Societal imperatives (e.g. South Africa meant barring / exclusion of people of colour to</p>	<p>2005, p. 14).</p> <p>Harper believed in more structured and paced courses (Holmberg, 2005, p. 16).</p> <p>Hermod believed in the freedom of the student to study as it suited them (Holmberg, 2005, p. 16).</p> <p>Guided Didactic Model - Guided two-way communication to inspire self-learning and student motivation (Moore & Kearsley, 2012, p. 210).</p> <p>Behaviorist Theory - Teacher has control, material is highly</p>				
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higher education or confined to “bush colleges” - so only access was to Unisa - a DE institution	structured, and interaction is based on assessment of student mastery (Moore & Kearsley, 2012, p. 213).				
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SECOND WAVE OF DEVELOPMENT (1960-1990)

Systems Approach to Distance Education

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3.15.2015

1 Larger Context (economics/ politics/ societal values and pressures/ government policies/ technological advances)	2 Theories/ Ways of Understanding	3 Institutional and Organizational Developments/ System	4 Teaching/ Learning Methodologies role of teacher/role of learner	5 Predominant Technologies	6 Key Authors
<p>Systems were needed to support student learning as well as course development and delivery.</p> <p>Need for a model to handle numerous decisions that are in line with university policies as well as a model to address demand for more courses and issues of importance (Haughey 2010).</p> <p>Government policies and other external requirements necessitated systems for quality assurance of course design and development processes. As an example, Open education movement were instrumental in these movements” Haughey (2010, p. 33).</p> <p>The development of the Open University coupled</p>	<p>Andragogy - is relevant to DE through the assumptions and principles of this theory-- adult learner must possess these 5 assumptions and principles outlined by Knowles--an adult characteristics of learning through andragogy approach. (Knowles, Holton, & Swanson, 2005, p.64-69) .</p> <p>Theory of Transactional Distance - DE students and administrators need to overcome a distance in understanding and</p>	<p>Design of open universities, “inability to come to terms with the consistent combined approach of face to face”, Shale (2010)</p> <p>British Open University established. (Open University, 2015).</p> <p>“Schools of the air came into being to broadcast K-12 educational programs.” Moore and Kearsley (2012).</p> <p>Single mode universities are institutions where distance education is the sole focus. Moore and Kearsley (2012).</p> <p>Community colleges, in particular, created new DE course using public television: the telecourse</p>	<p>University administrators become involved in course design and quality assurance. It calls for changes when new technologies, theories and application emerges. For example, emergence of new asynchronous technology will usher in new course design and quality assurance.</p> <p>Division of labour described by Peters (2010) before teaching had been in a single hand later that gave rise to division of labor. For example, division of labor split assignments into various segments for quick and easy</p>	<p>Printing Material:most common medium used in DE (Moore & Kearsley, 2012, p. 73)</p> <p>Television.Cleveland-Innes & Garrison, (2010 p.30)</p> <p>Radio. (pp. 52-56)</p> <p>Audio cassettes</p> <p>Videoconferencing/Telconferencing: used for distance education. (Bates & Sangra, 2010, p.35-36.</p> <p>Satellite technology:extension of real time events like courses, seminars,</p>	<p>Haughey, M.</p> <p>Moore, M.</p> <p>Kearsley, G.</p> <p>Peters, O.</p> <p>Miller, G.</p> <p>Tait, A.</p> <p>Knowles, M.</p> <p>Bates, T.</p> <p>Sangra, A.</p> <p>Holmberg, B.</p> <p>Shale, D.</p> <p>Jonassen, D.</p> <p>Davidson, M.</p>

<p>with industrialization drove people to embark on studies of their choice (Cleveland-Innes & Garrison, 2010, p. 33).</p> <p>Britain's Open University with the intention of delivering high quality, low-cost off campus education. (Bates & Sangra, 2011; Moore & Kearsley, 2012).</p> <p>Political push for educational development of citizens at a distance--a new 7-point understanding of education that ensures lifelong learning (Otto, P., 2001, p. 105)</p> <p>Opportunities for development of professional, scholarly literature for principles and strategies in DE and traditional education. (2012, p. 62-66).</p> <p>Education/Learning centers with private and part-time tutors, TV, radio, printed materials and books. (Cleveland-Innes &</p>	<p>geography. 3 components: dialogue, structure, and learner autonomy (Reyes, 2013, p.44).</p> <p>Constructivist approach- The way students learn is cognitively constructed. Student responsible for constructing meaning and being active in communication to gain knowledge (Moore & Kearsley, 2012, p. 215).</p> <p>Systems Approach- The systems to allow for more coordination and quality assurance. Moore and Kearsley (2012) claim "...a total systems approach, designers try to use a rich combination of all the media, delivered by the</p>	<p>(Cleveland-Innes & Garrison, 2010, p.30-31).</p> <p>External studies are a semi-independent body still worked in conjunction with a host university. The host university had final say on the courses offered from the external studies unit (Cleveland-Innes & Garrison, 2010, p. 92-93).</p> <p>Open learning institutions began collaborations to share courses and course materials. An example includes the International University Consortium (Cleveland-Innes & Garrison, 2010, p. 34).</p> <p>Free delivery of education. Example:</p> <ol style="list-style-type: none"> 1. Khan Academy at https://www.khanacademy.org 2. MIT OpenCourseware <p>Open University United Kingdom (1969) (Haughey, 2010, p.50). Others are, Open University of Sri Lanka; Open University</p>	<p>participation and performance (p.110).</p> <p>Learner support system in the OU UK model - Student - instructor dialogue with the tutor playing an important role to help develop a community of learners (Cleveland-Innes & Garrison, 2010, p. 57-58)</p> <p>Asynchronous/synchronous methodologies: using multipoint audio conferencing, sharing of desktop document (PowerPoint) and HD images may be used where bandwidth permits. Google Docs can allow for asynchronous methodology. (Bates & Sangra, 2011. p 33).</p> <p>Personal and self-improvement effort in studies.</p>	<p>and workshops. (2010, pp. 36-39)</p>	<p>Collins, M. Campbell, J. Bannan- Haag, B. Cleveland-Innes, M. Garrison, R. Otto, P</p>
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<p>Garrison, 2010). Distance Education programs and universities continue to struggle to gain esteem in higher education circles (Cleveland-Innes & Garrison, 2010, p. 101).</p>	<p>most convenient technologies, so that the learners benefit from the pedagogical strengths of each of them” (p. 72).</p>	<p>Australia; and Open University of India.</p>			
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THIRD WAVE OF DEVELOPMENT (1995-....)

Internet/Web-Based Communication

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4.05.2015

1 Larger Context (economics/ politics/ societal values and pressures/ government policies/ technological advances)	2 Theories/ Ways of Understanding	3 Institutional and Organizational Developments/ System	4 Teaching/ Learning Methodologies role of teacher/role of learner	5 Predominant Technologies	6 Key Authors
<p>Post-Industrialism/Neo-Industrialism. Peters (2010) presents the tenets of this era as including "...advanced technology...information-driven economy...digitized society... globalization...increased significance of knowledge and knowledge media, the rise of the knowledge worker... virtual factories, virtual workplaces, the increasing role of services, of information and of theoretical knowledge" (p. 12).</p> <p>Jenkins, and Tapscott</p>	<p>Social Constructivism Theory (Vygotsky,1978) In DE, this theory is based on the instructional strategy in which computer-supported collaborative learning help students acquire skills in communication, knowledge sharing, critical thinking, and use of technologies found in workplaces.</p> <p>Heutagogy--(Anderson & Dron, 2010); In DE, this theory is centered on a learner's self-determination that comes naturally, perhaps as a</p>	<p>Rich Environments for Active Learning (REAL). Dunlap (1999) defined REAL as settings that are focused on student learning and include "...authentic contexts, collaboration, intentional learning, generative learning, and reflection" (p. 2).</p> <p>Dunlap (1999) also noted characteristics of successful REAL scenarios that include high levels of interaction, collaboration, and teacher involvement.</p>	<p>Interaction and participation meant that instructors' roles should move from being the "...sage on the stage to the coach on the sideline" (Learning, 2004, p. 103)</p> <p>Pedagogical shift from knowledge dissemination to guiding students in knowledge acquisition (Swan, 2010).</p> <p>Interactive</p>	<p>Interactive Technologies--The Internet provides the means to deliver interactive technologies such as video, audio (chat), text messages, streaming video. These technologies enhanced web-based courses and online communications. (Anderson, 2003).</p> <p>Swan (2010) points to the "...growth of digital multimedia and...inexpensive multimedia tools"</p>	<p>Peters, O. Holmberg, B. Anderson, T. Moore, M.G. Rowntree, D. Bates, A.W. Daniel, J. Keegan, D. Garrison, D.R. Siemens, G. Dron, J.</p>

<p>and Williams highlight the shift in distance education technologies from "...presentation, push-type..." to digital technologies that are "...interactive, generative, and uniquely participatory" (as cited in Swan, 2010, p. 110).</p> <p>Advancement in Technology-In the larger context, development of communications tools gave rise to the growth of both synchronous and asynchronous communication and pedagogy (Vaughan, 2010).</p> <p>Society's Demand for Higher Education--in trying to keep the cost of higher education low because of government reduction in funding higher education, cost reduction strategies were</p>	<p>result of past learning methods or styles and experience. It resonates with 21st century distance learning pedagogical approach</p> <p>"Social-constructivist pedagogy acknowledges the social nature of knowledge and of its creation in the minds of individual learners. Teachers do not merely transmit knowledge to be passively consumed by learners; rather, each learner constructs means by which new knowledge is both created and integrated with existing knowledge" (Anderson, 2003).</p> <p>Connectivism-As more technology and information become available teaching and learning style emerged about 1996 that was</p>	<p>1997-African Virtual University with ten more African Universities joining in 2009.</p> <p>1995-Virtual University Catalonia (VOC) Spain.</p> <p>In distance education, provides ubiquitous access regardless of location. development of asynchronous learning networks. Virtual universities show examples of intensive ICT-driven innovation in online learning. (Cleveland-Innes & Garrison (2010, p. 214-235).</p> <p>Institutional Case Studies -- 1996--</p>	<p>technologies lead to enhanced teaching presence which leads to deep learning (Garrison & Cleveland-Innes, 2005).</p> <p>Peters (2010) notes the roles of teachers, in digitized environments, changing to that of "...facilitators, advisors, or counselors" (p. 141).</p> <p>Shift from pedagogical approaches (emphasis on the teacher) to Heutagogical approaches - Role and responsibility of the learner to take responsibility for one's own learning (Siemens, 2005a, 2005b, 2007 & Bajjnath & Ryan, 2013).</p>	<p>(p.111).</p> <p>Swan (2010) highlights the development of Web 2.0 applications that allow for collaboration (p. 112).</p> <p>Peters (2010) notes that "...for distance educators four astounding innovations are important: improved personal computer technology, multimedia technology, digital video-compression technology and Internet technology" (p. 10).</p>	<p>Vaughan,N. D.</p> <p>Swan, K.</p> <p>Evans, T.</p> <p>Pauling, B.</p>
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<p>adopted to cope up with high demand for both distance education and traditional education enrollment in the US. (Vaughan, 2010).</p> <p>Mobile device ownership increased, globally, and is currently approaching ubiquity. The International Telecommunication Union reports a global, mobile phone, penetration rate of 96% (as cited in Tagoe & Abakah, 2014, p. 91).</p> <p>The emphasis in DE shifted to Interaction (Dron & Anderson, 2007)</p> <p>The need to define real learning needs of learners was embraced rather than just “absorb or digest” information transmitted. (buzz words like “relevant” education</p>	<p>known as Connectivism.” (Anderson & Dron, 2011). In connectivism, the learner’s role is not to memorize or even understand everything, but to have the capacity to find and apply knowledge when and where it is needed (Anderson & Dron, 2011).</p> <p>Community of Inquiry (CoI). (2002) Educational experience that result from social, cognitive and teaching presence; all three are necessary for learning and when combined result in learning. In DE, the value of Web 2.0 technologies to eLearning is tied to CoI. Web 2.0 tool such as wiki or blog can be viewed as a means of facilitating learning and knowledge. (Swan, K. 2010. In Cleveland-Innes &</p>	<p>Virginia Tech, United States strategic plans for technology. By 2010 The Center for Innovation and Learning had supported more than 120 strategic instructional projects assessments that showed greater student and faculty interaction, equal or superior assessment performance, and more active learning in technology-supported teaching compared with standards lectures. (Bates & Sangra, 2011).</p> <p>Internet capabilities provided bigger opportunities for Massification of higher education (Peters, 2010)</p>	<p>Furthermore the ‘digital divide’ between those who “have” (access to internet connectivity and those who do “not have” connectivity became wider. High and exploitative costs of broadband in developing nations is prohibitive. (Bajjnath & Ryan, 2013</p> <p>”Individualization of the learning process” (Peters, 2001:5)</p> <p>Students not just accessing the materials but discussing with their teachers (Garrison in Peters, 2001: 11)</p> <p>Learners and teacher</p>		
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abounded) (Dron & Anderson, 2007).

Garrison (2010).

Theory of Transactional Distance - DE students and administrators need to overcome a distance in understanding and geography. Three components: dialogue, structure, and learner autonomy (Reyes, 2013, p.44).

Equivalency Theorem: Anderson (2003) introduces an equivalency theorem that addresses three modes of interaction: student to student, student to teacher, and student to content. If one or more of the modes is high quality then the other methods need not be high quality and could even be eliminated.

collaborate to create the content of study - Teacher becomes the conductor or director of the learning process.

- Not the leader. (Greenhow, Robelia & Hughes, 2009)

Use of shared repositories - later Open Educational Resources (OERs)

CURRENT TRENDS (2000's....)

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4.12.2015

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Rise of social networks utilised by businesses and educational institutions for	Heutagogy - Kenyon and Hase (2001) define Heutagogy as "...the study of	Massive Open Online Courses (MOOCs) - Classes offered by	Self-Directed Learning - Cleveland-Innes and	Cloud Computing - Ice (2010) describes	Anderson, T. Peters, O.

<p>marketing purposes.</p> <p>Cleveland-Innes and Sangra (2010) describe a competitive educational environment where it is necessary for institutions to collaborate.</p> <p>Cleveland-Innes and Sangra (2010) cite the National Center for Public Policy and Higher Education report that funding has declined following World War II, creating a "...market-driven environment for education institutions..." (p. 230).</p> <p>Employers seek candidates with technological competencies. Oblinger (as cited in Cleveland-Innes and Sangra, 2010) notes students must be technologically competent to be able to graduate and to compete after graduation.</p> <p>Move by traditional institutions to blended and online learning.</p> <p>Utilization of Information and Communication Technologies "African countries, like countries</p>	<p>self-determined learning..." (p. 3).</p> <p>Theory of Connectivism - Theory that describes learning in a setting that is social, complex, and Web-connected (Siemens & Conole, 2011). It also facilitates synchronous and asynchronous learning (Kropf, 2013).</p> <p>Refined Theory of Transactional Distance: using discourse analysis techniques, demonstrated more specifically how changes in dialogue, structure, and teacher/learner control affected changes in the others. (Shinkle, 2001), (Zhang, 2003), (Moore & Kearsley, 2012).</p> <p>Peeragogy: "Peeragogy is a collection of techniques for collaborative learning and collaborative work. By learning how to "work smart" together, we hope to leave the world in a better state than it was when we arrived"</p>	<p>institutions, offering open access to all elements of the class and can include thousands of students (Skiba, 2012). Massive open online course is an online course that provides open access with unlimited participation through the Internet. It provides interactive user forums that support community interactions among all.</p> <p>Open Educational Resources (OERs) - Items for educational pursuits that anyone can access, utilize, and refashion (Downes, 2011).</p> <p>Emerging Technologies: Are experiencing the same scrutiny that "now established" technologies faced when they were "emerging." It is important to look at the theories of old technology to understand how new</p>	<p>Sangra (2010) see students in higher education environments taking on roles that are "...self-directed, continuous, active..." (p. 233).</p> <p>Double Loop Learning - Blaschke (2012) describes learners engaging in this action "... consider the problem and the resulting action and outcomes, in addition to reflecting upon the problem-solving process and how it influences the learner's own beliefs and actions..." (p. 59).</p> <p>Collaborative learning - Muuro, Wagacha, Oboko, and Kihoro (2014) cite the expansion of the WWW, social interaction on the Internet, and the advent of Web 2.0</p>	<p>cloud computing as applications for productivity that afford users the opportunity to engage in "...desktop-based tasks on lightweight devices..." (p. 159)</p> <p>Web-connected mobile devices such as: Tablets, smartphones, laptops, and other devices.</p> <p>Rich Internet Application (RIA) - Ice (2010) highlights applications with "...robust characteristics of desktop application..." and are transmitted via "...Web browser plug-ins or...sandboxes or virtual machines"</p>	<p>Hase, S.</p> <p>Kenyon, C.</p> <p>Siemens, G.</p> <p>Downes, S.</p> <p>Poggeler, F.</p> <p>Jonassen, D.</p> <p>Blaschke, L.</p> <p>Kropf, D. C.</p> <p>Garrison, D. R.</p> <p>Cleveland-Innes</p> <p>Sangra, A</p> <p>Bates, A.W.</p>
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<p>everywhere, are looking to the educational possibilities offered by distance education and Information and Communication Technologies (ICTs) as a way of expanding and improving the systems” (Oladejo & Gesinde, 2014: 134).</p> <p>Evolving Student Body - Cleveland-Innes and Sangra (2010) discuss the evolving characteristics of students as well as the increases in enrollments of older students.</p> <p>Advances in technologies used to connect by researchers, students and academics.</p> <p>Rise of new technology requirements and learners’ attention on grades and assessments.</p> <p>Era of “networked generation”: Millennials (or digital natives” but also occupied by “digital immigrants.”</p> <p>Space and Time – not really constraints to teaching and</p>	<p>(Rheingold, 2014).</p> <p>Metaliteracy MOOC: “... is a comprehensive open learning model that reimagines information literacy for social media environments and online communities in the 21st century. Metaliteracy offers a unified framework that promotes critical thinking, participatory learning, and metacognitive reflection as interrelated and ongoing collaborative practices” (Mackey and Jacobson, 2011:1).</p> <p>Metaliteracy Model is based on producing, sharing, using and incorporating information that are generated from OERs, social media, mobile and online sources.</p> <p>Community of Inquiry (CoI) - Educational experience that result from social, cognitive and teaching presence; all three are necessary for learning and when combined result in learning. In DE, the value of</p>	<p>technologies can be applied in DE (Anderson, 2010).</p> <p>Virtual Schools: Complementary online education.The African Virtual University (AVU) founded as a World Bank project in 1997, developed to a Pan African Intergovernmental Organization in 2003 with 27- country members. Offers online degree program. (AVU, 1012).</p>	<p>platforms as key components in the increased efficacy and employment of collaborative environments in distance education.</p> <p>Autonomous Learning - Peters (2001) notes that the “...greatest impression made by the digital-learning environment...is its enabling of autonomous learning...” (p. 145).</p> <p>Social Media as tools for Teaching and Learning:</p> <p>Educational institutions use social media such as Twitter, Facebook, Wikis to collaborate, teach and connect with students across continents, Example, UMUC.Edu.</p> <p>Twitter is popular with higher education</p>	<p>p. 159).</p> <p>Web 2.0 Platforms include:</p> <p>Chatrooms-- Synchronous online discussion. Provides opportunity for student-student, and student-teacher educational exchanges. Moore & Kearsley, 2012, p.142).</p> <p>Blogs Interactive forum for students/teacher s/groups to review, collaborate and learn--a Web 2.0 tool. Yerrick (2013) cites examples as Blackboard, WordPress, and</p>
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<p>learning.</p> <p>Students are looking for courses that meet their schedules and circumstances</p> <p>Developing people who are able to cope with the changing world</p> <p>Greater need to change the way people learn by employing use of emerging technologies</p> <p>Transformation of Higher Education Institutions from being primary providers of traditional learning to being facilitators of learning environments.</p> <p>“Aderinoye, Siaciwena, and Wright (2009) corroborated Leary & Berge’s (2007) position, maintaining that Africa lacks high-speed Internet infrastructure, access to computers, and human resources with the expertise and knowledge, to implement and support hi-tech delivery methods effectively. In Africa,</p>	<p>Web 2.0 technologies to eLearning is tied to Col. Web 2.0 tool such as wiki or blog can be viewed as a means of facilitating learning and knowledge. (Swan, K. 2010. In Cleveland--Innes & Garrison (2010).</p> <p>Constructivism- Romney and Brueseke (2014) claimed that Constructivist principles include centralized knowledge, with knowledge tied to the instructor, utilizing centralized tools, and requiring students to gather and store knowledge for future use.</p> <p style="text-align: center;">Situated Learning Theory (Jonassen, et al).</p> <p>Theories for Autonomous Learning and Skills for Virtual Environments (in Peters, 2010).</p> <p>Complexity theory- learner’s ability to articulate and achieve defined goals.</p> <p>Net-aware theories- provides co-operative ways</p>		<p>students who use it to connect and collaborate with teachers, students and peers in both asynchronous and synchronous forms.</p> <p>Flipped Classroom: Online/Asynchronous Learning: (Clark, 2011) -- Learning takes place anytime, anywhere with learner’s pace.</p> <p>Community-Centered Learning: Community-centered learning environment support two types of learning: 1. the social construction of knowledge for small communities, and 2. larger student community, society and culture. Both levels thrive on the theory of constructivism. (Cleveland-Innes & Garrison, 2010, p. 120).</p>	<p>Blogspot.</p> <p>Twitter A social network of collaboration, discussions and interactions for teachers, subject experts and students. Bates & Sangra, 2010, p.34-35.</p> <p>Wikis Also termed a social network but is regarded as an a web application which allows users to interact, collaborate and exchange information or ideas. Yerrick (2013) offers PBWorks, EdWiki, and Moodle as examples of hosts.</p> <p>Facebook An Online social</p>	
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<p>most of the advanced form of technology is not a viable medium for most ODL learners as many of them still live in very remote areas.”</p>	<p>of learning.</p>		<p>Dialogical Learning - Peters (2001) describes several aspects of this concept including students interacting with: faculty, staff, other students, and other entities connected to the distance education process.</p> <p>Structured Learning - Peters (2001) indicates that distance education institutions currently employ courses and programs that are planned and linear.</p> <p>Blended Learning - Garrison and Vaughan (in Vaughan, 2010) define as the combination of “...face-to-face and online approaches and technologies” (p. 165). Vaughan (2010) touts benefits such as flexibility, improved communication, and</p>	<p>network services launched in 2004 that provides users a forum to exchange messages, photos, videos as well as post any kind of material for users to view and review.</p> <p>Google Docs is a productivity application that allows for collaborative work from a variety of Web-accessible devices.</p> <p>Open Educational Resources (OERs) - Items for educational pursuits that anyone can access, utilize, and refashion (Downes, 2011).</p>	
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			<p>better student outcomes.</p> <p>Culture of sharing among institutions</p>	<p>YouTube and Vimeo - Web 2.0 platforms that allows user to post, view, and discuss video content.</p> <p>iTunes U - Yerrick (2013) describes as a service that hosts podcasts creation and dissemination, RSS feeds, and rich media.</p> <p>Skype</p> <p>Blogs (Weblogs)</p> <p>Wikis</p> <p>Podcasts</p> <p>(vlogs - video, or audio-blogs if only audio)</p> <p>Imeem™,</p> <p>Writeboard™,</p>	
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Cummulative References for Waves 1, 2, 3 and Current Trends

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3.01.2015 -- 4.12.2015

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