Online Pedagogy and Management for Smart Societies

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PREFACE

Societies are the merits of humanities and their shared values, beliefs and experiences. Communication and education play a great role to make a bridge on fostering equality and access for the learning and teaching. In this respect, online pedagogy and also management become important to provide equal access and usability in all levels of education. There is an intensified need to consider new tendencies and different disciplines in socities by integrating technology. Being digital natives for contributing the importance of beimg smart society is crucial. Making facilities in education for everyone increases the signifance of being networked society for the social justice and equality.

As quality is a mirror of applications, focusing on online pedagogy and management becomes essential by encapsualting the different disciplines and cases. This book sheds a light on different disciplines with the inputs of online pedagogy and management for smart socities. facilitated through the development of open online learning and education . To be more smarter to be more equal, paying attention to accessibility, open resources, news of learning within sociological and pyschological aspects is needed. In this respect, universal values are integrated in online pedagogy and management through merging with all disciplines for smart socities.

Smart societies have potential of being social agents and win-win policy making contexts for the development and innovation. Personal and professional developments rely on the integration of technology through new way of pedagogy for a whole picture. New ways of life, new ways of learning and new profiles contribute us to create a smart society with an appropriate pedagogy and management.

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CHAPTER 1

TEACHER TRANSFORMATION THROUGH AND FOR DIGITAL LEARNING AND ONLINE PEDAGOGY IN SMART SOCIETY

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Abstract

E-learning is one of the fastest growing industry in the education sector. Universities around the globe have instituted different mechanisms to deliver instructions, conduct assessment and other academic and administrative functions using modern and Web 4.0 tools and technologies. From simple online courses to massive open online courses, we have witnessed a huge paradigm shift. Ubiquitous learning has become the need of the hour in order to create a base for smart society. Role of teachers in this digital era dominated by artificial intelligence applications has been redefined. New dimensions to online pedagogy has created transformative spaces in teaching and learning. This chapter examines such transformative pedagogies for cognition, curriculum and assessment and how the universities have transgressed and transformed as a result of these web 4.0 tools and technologies in smart society.

Keywords: Elearning, transformation, transgression, curriculum, web 4.0, artificial intelligence, Ubiquitous learning, massive open online courses, smart society

Introduction

According to elearningindustry.com the global eLearning market was worth $107 billion in 2015, which is expected to grow to $325 billion by the year 2025. This might happen due to demand for low cost educational solutions, reducing prices of learning solutions, lifelong learning as a greater means for sustainable learning and ease of online education as compared to campus based education (Pappas, 2019). An ever increasing demand for providing educational opportunities to masses has resulted into development various learning management systems and platforms, open educational resources and other tools and applications, making universities to switch to elearning mode. Literature shows three scenarios of the use of e-learning in educational institutions (Mason, 1998; Mitra, 1999; Mayes, 2000; Berg, Collins, & Dougherty, 2000; Bates, 2001; Laurillard, 2002;):

- As a supporting mechanism to face-to-face teaching
- As a blended learning model
- As a fully online model

There are various key drivers for this eLearning market growth. Emerging technologies like Wearable devices, artificial intelligence platforms, big data, augment reality / virtual reality devices and machine learning are fueling this sector by enabling creation, distribution and sharing of content using innovative and interactive methods. For instance, a Mumbai (India) based startup, QuoDeck uses gamification using SaaS based platform to engage learners and improving learner's experience (Asokan, 2019). Here entire courses are created using game-based learning and storyline-based games. This platform also uses Analytics, artificial intelligence (AI) and machine learning (ML) at the back-end to capture data for obtaining insights about learner behaviour and analysing their progress. While pondering over, is online learning the future of education?, Yu & Hu (2016) identified certain challenges like lack of quality control and especially, the lack of high-quality teachers. China and South Korea are among the largest e-learning markets globally and they have introduced a scheme of 'Star Teacher' as a teacher evaluation mechanism for ascertaining quality of teaching.

Transformative Pedagogy

Sir Ken Robinson (2005) warns us about a cultural crisis in our educational system:

"The educational reforms really needed now are actually being held back by the attitudes to education that many policy makers learned when they went

to school – 20, 30, or 40 years ago. Many seem to believe the way to the future is simply to do better what we did in the past. The truth is we need to do something completely different for today's students" (2005, p.2).

Role of a teacher as the guiding force in a classroom has been well researched. Delivering instruction, motivating and engaging students and improving classroom behaviour are the foundations of classroom behaviour management. However, the role of a teacher is much above simply developing lesson, delivering instruction and managing classroom behaviour. Ginott (1975) takes teacher as the 'decisive element' with 'tremendous power' affecting classroom behaviour. A teacher can make a classroom joyous, inspirational, and humanizing. To attain maximum academic achievement by the students and classroom behaviour, a teacher creates a community in the class for the students to have a feeling of belongingness. Such a teacher-student relationship is essential to positive and successful classroom management (Wang, Haertel, & Walberg, 1993). Marzano & Maranzo (2003) found fewer discipline and behavioural issues in the classroom if the teacher has strong, high-quality and caring relationships with their students as compared with those having no such relationship.

Another aspect for the teacher transformation is the relationship between creativity, intelligence and cognition (Vera John-Steiner, 2000; Smolucha, 1992; Perkins, 1994). By examining the tripole of content, products and operations, Guilford (1988) in his Structure of the Intellect model, focuses on divergent thinking as being a basic process of intelligence. This model has a strong implications for online education. Various types of conent (Visual, auditory, symbolic, semantic or behavioural) can be matched to each operation (evaluation, convergent production, divergent production, memory retention, memory recording or cognition) and products (units, classes, relations, systems, transformations or implications) to form a separate factor associated with a particular intellectual ability. The fourth industrial age represents where the processes and products are governed by modern technologies like artificial intelligence, blockchain, Internet of things and sensors, etc. Boden (2004) suggested a computational model of psychology where the human thoughts can be represented through semantic nets and systems of artificial intelligence, for example, poem writing by computers, creating jokes, painting pictures, designing buildings or discovering mathematical rules. She suggests three types of creative thinking which can be modelled through artificial intelligence networks: (a) combinational creativity (novel combination of ideas already existing in the network, (b) exploratory creativity (ideas within a domain), and (c) transformational creativity (modifying the rules of the discipline). Sawyer (2012) reports about a simulated collaborative creative process done at Sony's

Computer Science Lab in Paris in 2003, when a virtual orchestra of 10 computerised performers generated a simple sequence of notes through programming. This has implications for online education and online pedagogy for adaptive learning strategies and personalisation of learning.

ERIC Pedagogical Model of e-learning

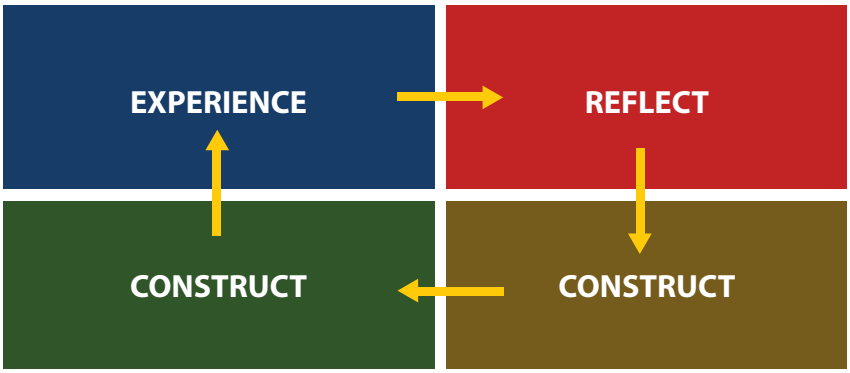

Figure 1. ERIC Model (Sharma & Mishra, 2007)

Sharma and Mishra (2007) proposed an ERIC (Experience, Reflect, Interact, & Construct) pedagogical model of learning (Figure 1) in digital environments. The learner gains learning experiences anywhere and anytime using variety of educational resources. In the next phase the learner reflects on those experiences gained and then proceeds to interact with teacher, peer or other elements of educational system in synchronous and asynchronous modes. Final step is for the learner to construct the knowledge by engaging in group activies or presentations or projects.

Some other pedagogical models for e-learning environments are as explained as hereunder:

- Problem-based learning (Barrows, 1994). Barrows brought out his classic work on problem-based learning as applied to medical education in 1994 while addressing two major challenges of medical teachers in terms of curriculum and inefficient method of teaching. It has been one of the most innovative pedagogical method in education. In this method, the learning is initiated by creating opportunities to solve and authentic problem. Here, the learners construct content knowledge while locating the solution of a problem and develop problem-solving and self-directed learning skills. The applications of problem based learning lies not only

in medical field, but also many other areas like architecture, business administration, chemical engineering, engineering studies, law schools, leadership education, nursing, social work, and teacher education, biology, biochemistry, calculus, chemistry, economics, geology, psychology, science courses, physics, art history, educational psychology, leadership education, criminal justice, nutrition and dietetics, etc (Cawley, 1989; Donaldson,1989; Kurtz et al., 1990; Boud and Feletti, 1991; Higgins, 1994; Garland, 1995; Smith and Hoersch, 1995; Merchand, 1995; Allen et al., 1996; Seltzer et al.,1996; Bridges and Hallinger, 1996; Woods, 1996; Reynolds, 1997; Bolzan and Heycox, 1998; Maitland, 1998; Edens, 2000; Savin-Baden, 2000; Pletinckx and Segers, 2001; Cunningham and Cordeiro,2003; Oberlander and Talbert-Johnson, 2004; Savin-Baden and Wilkie, 2004; Barak and Dori, 2005; Barnard et al., 2005; Szeberenyi, 2005; Osgood et al., 2005).

- Case-based learning: Chen, Rong-An, & Harris, 2006; and Lynn, 1996 reported case based learning to be widely used in traditional face-to-face teaching settings. This method has been found to improve cognitive learning in face-to-face classes, however, its results have been found to vary when used in distance education classes in an online asynchronous settings. Main factors for the success of this method are course design, class preparation and method of conducting class discussions (Charan, 1976).
- Learning by doing: The theory of learning by doing was proposed by American philosopher John Dewey as a hands-on method to learning (Wikipedia, 2019). The purpose here is to interact with their environment to adapt and learn. Schank (1997) identified the role of the teacher as an exposer of knowledge for the learner. Schank pointed out that learning by doing is to try things out, formulate hypotheses and then test them. Teacher here acts as a guide for the students by answering their questions and helps them in finding solutions to problems.
- Role-play-based learning (Ip & Linser, 1999) comprises of dynamic goal based learning, role play and web-based communication and collaboration. Focus is on enhancing the experiences and motivation of learners who are working towards realisation of a goal. This can be done by adopting a persona in a role-pay simulation setting by creating dynamic and reflexive context for learners. The advantages of role-play simulation in an online environment is that it can be used in both synchronous and asynchronous modes.

- Learning by designing (Naidu, Anderson, & Riddle, 2000) is a practice-based method for deep learning. Its benefit in development of competences in learners through certain learning paths. Its merit lies in its authenticity and situatedness (Naidu, Anderson, & Riddle, 2000).

Teacher Preparation for coming of age in the 4th Industrial Age (the age of Artificial Intelligence)

Pant (2019) identifies two major revolutions we are witnessing currently: '4th Industrial Revolution' (idea promoted by Prof Klaus Schwab at the 2016 World Economic Forum at Davos), and 'the 4th education revolution' (proposed by Prof Anthony Seldon in his 2018 book). Both of these concepts point us towards the disruptions in traditional educational model. He predicts the future of education is autonomous learning powered by artificial intelligence applications. This brings our attention to the fact that so far more stress has been on learner. But what about teacher? Is the teacher ready for playing the right kind of role in this digital era of artificial intelligence? To cater to this need, Pant (2020) proposes an AI-fluent SmartEducator program to train the teacher, because as we enter the 3rd decade of 21st Century, the teachers also need to be familiarised with artificial intelligence applications and potential because it is the driver for both the 4th Industrial revolution and the 4th education revolution. This program prepares the teacher for the triple helix of AI-readiness: The Concepts (theory); The tools; The applications (educational). The program has been envisaged as a year long with 4 quarters of 3 months each. The educator-learner can avail a completion certificate from level 1 to level 4 of becoming an AI-ready educator:

Level 1: AI-familiar educator

Level 2: AI-competent educator

Level 3: AI-proficient educator

Level 4: AI-fluent Smart educator

Bases of Smart Societies

Smart societies rely on different dynamics. The use of technology is a main dynamic of smart society which contributes a better, usable, accessible world. Shifting all institutions to become a social agent by incorporating changes and development is crucial. Therefore, building facilities and potential of digital technology and connected devices for learning throughout the life plays a great role for the bases of smart societies. In improving the lives of people, fostering learning

and making connected networked relations, establishing the benefits on the merits of digital technologies. Smart society provides the use of knowledge. Smart society by the integration of technology makes an effectiveness of institutions, empowerment of economy, well-being of digital citizens (Nam, Pardo, 2011).

Management is a key factor to integrate the development of societies, and the use of technology. Making leadership and entrepreneurship for making digital citizens is important. In this respect, creating a culture of smart society requires a collaboration and network sharing (Neirotti, Marco, Corinna Cagliano, Mangano, Scorrano, 2014).

Conclusions

In a given educational context, pedagogical innovation is a continuous process. As we enter the third decade of the 21st Century, the teacher as an individual and the educational institutions need to create conditions for meaningful, better and faster learning for all. Basically learning is a transformation of our attitude, understanding or beliefs towards the world as we see it, through critical reflection on our assumptions and beliefs. This involves the process to arrive at new interpretation of learning based on earlier interpretations and thus such a conceptual change can result in some discomfort or insecurity. This becomes all the more prevalent in the age of social media, fake news or AI bots when the machines can affect our emotional intelligence. A skilled teacher in online education environments can pay a way for inculcating a process of critical reflection on our previous understandings and knowledge. Such advancement of instructional learning through a variety of alternate teaching strategies based on transformative pedagogies can help in creating of a meaningful teacher-student community in the classroom. Online learning can easily promote collaborative learning. The transformative pedagogical innovations in digital world can bring a paradigm shift in the students from having a passive role in teaching, learning and assessment, to an autonomous and self-directed learner actively involving in the intellectual discourse for a smart society.

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CHAPTER 2

ONLINE OPEN PEDAGOGY AND MANAGEMENT

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"If we teach today's students as we taught yesterday's,
we rob them of tomorrow."

John Dewey

Introduction

A rethink of leadership at all levels is needed to achieve the goals of learning and education in 2030, when learners will take the lead in orchestrating the process and the way they learn and in choosing their own learning pathways. The style and focus of leadership must change to prepare learners for a dynamic world socially connected through digital technology. To prepare for this change, leaders at all levels can promote sustainable open education activities and initiatives through transparent top-down and bottom-up approaches. They can pave the way for creating openness by inspiring and enabling people to engage in lifelong learning. Executives and managers can facilitate the cultural change brought about by the digital transformation in their organizations. Fostering the quality culture is crucial and must be in everyone's interest, but it must be encouraged and supported by managers. There is therefore a need for people with the knowledge, skills, competences and attitudes to guide this process and to analyze and evaluate digital work environments.

Learning is omnipresent, because it takes place with all means, at any time and everywhere. Learning today can take many forms, such as formal, informal and non-normal learning, which can take place anywhere and at any time. Whoever we are, wherever we live, we have the opportunity to learn every day of our lives. The increase in openness and open online pedagogy has implications for the

paradigm shift in education, management, and for university reforms in the field of open, online and flexible learning.

After this introduction, the following sections are presented. To start and to set the scene current global trends and challenges in education in the 21st century is presented, focusing on the UNESCO initiative Futures of education. After that ecologies of open online learning is introduced. Finally, this chapter ends with some conclusions.

Futures Of Education

The world is changing rapidly and faces many global challenges. The main challenges for education today and in the near future are globalization, technological innovation, climate change, demographic change and digitalization. Schwab (2016) argued that the fourth industrial revolution has led to new demands and opportunities to which individuals and society must respond because it will fundamentally change the way people live, work, relate communicate, and learn in formal and informal environments. In line with this revolution, there are even calls for a social revolution that includes social, emotional, cooperative and emphatic skills, attitudes and values. Accordingly, the role of education is not only to impart knowledge and skills, but also to teach people how to create knowledge, which is a source of competitiveness and prosperity for the public and a crucial economic resource.

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) (SDG Sustainability Goals), in particular the SDG4, emphasize and promote global, lifelong and life-wide learning. UNESCO (2015a, 2015b, 2015c) states that education should be available to all at all times, everywhere and by all means. The objectives of SDG4 are to promote and ensure inclusion, equity, equality and quality in education through access, democracy, affordability, effectiveness and lifelong, continuous learning or ongoing learning according to Sanna Järvele (25 October 2018). Other challenges both in education and in society are the influences and use of blockchain, 3D, the Internet of Things, cloud computing, artificial intelligence, learning analytics, robotization and other developments in the field of technology-supported and social and mobile learning. In addition, education is facing the growing trend towards micro-competences and the need for micro-learning in the workplace and in continuing vocational training. There are therefore urgent calls for modern governance and for comprehensive and agile university reforms with dynamic, proactive leadership and administration and in-

novative, inclusive, open educational approaches. The Director General of UNESCO, Irina Bokova, already declared the following in 2016:

> A fundamental change is needed in the way we think about the role of education in global development, because it has a catalytic effect on the well-being of individuals and the future of our planet... Today more than ever, education has the responsibility to adapt to the challenges and aspirations of the 21st century and to promote the right values and skills that lead to sustainable and inclusive growth and peaceful coexistence. (UNESCO, 2016).

Today's challenges cannot be solved by individual countries, research groups or scientists. Instead, such challenges require countries, industries, organizations and researchers in different fields to collaborate, network, conduct experiments and work in a less linear and more mobile way. Education is more than a response to a changing world, but rather education changes the world (UNESCO, 2019). The European Commission, Committee on Culture and Education (Łybacka, 2018) argued that the value of modern human capital results from intellectual potential, the ability to adapt to changes in the environment, an innovation-friendly attitude and willingness to take risks. Łybacka (2018) argued already in 2018, that there is an urgent need to reform and transform the educational system according to and to strengthen ecologies of openness that include inclusion, overlap and interstices. This change requires not only adaptation, but also the ability to predict, but even more so to respond proactively to the constant change and unclear roles of policy and educational research (Jemni et al., 2016; Jhangiani & Biswas-Diener, 2017). The main questions of the 21st century, why, what, who, for whom, which are related to learning, require innovative answers taking into account the ecology, therefore, seamless solutions with high elasticity are required. Furthermore, Łybacka (2018) argued that higher education plays a crucial role in developing the potential and competitiveness of the European economy. The level of education, social entrepreneurship and an innovation-friendly attitude are the guarantees for success. The knowledge triangle and the links between research and education must be strengthened. Łybacka (2018) also stressed that higher education must be much more flexible and open, facilitating the transition to different levels of education, providing for the recognition of non-formal and informal learning and using different forms of curriculum delivery, including through the use of new technologies that allow for student-centered and interdisciplinary programs. The European Commission even recognized the potential of the digital age and stressed the need to overcome regulatory barriers (The European Commission, 2017).

In autumn 2019 UNESCO launched its new initiative on the "Futures of Education" which aims to rethink education and to shape the future. The initiative goes beyond the SDG 2030 and has its perspective on 2050. The initiative catalyzes a global debate on how knowledge, education and learning must be redesigned in a world of increasing complexity, uncertainty and precariousness (UNESCO, 2019). According to this initiative (2019) with accelerated climate change, the fragility of our planet is becoming increasingly evident. Persistent inequalities, social fragmentation and political extremism are putting many societies in crisis. Advances in digital communications, artificial intelligence and biotechnology have great potential, but also raise serious ethical and administrative concerns, especially as promises of innovation and technological change contribute unevenly to human prosperity. Looking ahead to 2050 and beyond, the Futures of Education initiative seeks to rethink how education and knowledge can contribute to the global common good. The initiative will launch a global debate on how knowledge and learning can shape the future of humanity and the planet. The initiative catalyzes a global debate on how knowledge, education and learning must be reshaped in a world of increasing complexity, insecurity and precariousness. Knowledge and learning are mankind's greatest renewable resources for responding to challenges and inventing alternatives. Education is more than a response to a changing world. Education changes the world. This initiative mobilizes the many rich ways of being and knowing to harness the collective intelligence of humanity. It is based on a broad, open consultation process involving young people, educators, civil society, governments, businesses and other stakeholders. The work is led by a high-level International Commission of thought leaders from different areas and different regions of the world. In November 2021, the Commission will publish a report that will provide a forward-looking vision of how education and learning can enable us to become what we want to be. Knowledge and learning are mankind's greatest renewable resources for responding to challenges and inventing alternatives. Education is thus more than a response to a changing world. Education changes the world.

Ecologies Of Open Online Learning

The rise of the unbundling paradigm in many areas of society, such as already in film, music, booking systems, etc, and with the start of the opening up of education many traditional assumptions and practices are being challenged by extending traditional forms of delivery, promoting new innovative learning designs, enabling open pedagogy, implementing new business models and outsourcing, for example, career guidance, library resources and student support services

(European Commission, 2013; Conole, 2014; Inamorato dos Santos et al, 2016; Watters, 2012).

Universities around the world are beginning to rethink and change their teaching content and methods to reflect on teaching and learning in the digital age and the blurring of traditional boundaries between formal and informal learning (Siemens, Gasevic, & Dawson, 2015). They also seek to widen their access and increase their openness and flexibility to attract and retain a wider range of students than ever before. It is therefore time to recall the main task of universities, which is to train their students to solve complex global problems today and in the unpredictable future. It is obvious that today's groundbreaking research rarely follows the classical academic disciplines but is rather cross-disciplinary. To meet these challenges, uncertainties and changes of our time, institutions and organizations must therefore find new ways to work, experiment and interact with the community at all levels - local, national and global - with a more agile and seamless approach that focuses on ecology, intersections and interstices. The academic world is no exception. Universities must therefore strengthen the ecology and culture of open education. Therefore, the business models, reforms and organizational structures of universities need to change, as do the management and leadership in the digital age. Capacity building and the promotion of a culture of quality and openness are therefore key issues in this transformation. Similarly, a new understanding of quality (Kear et al., 2016) must be considered as we move away from a mechanistic "tick-box" approach and move towards quality models that emphasize learning processes, learner engagement, analysis, outcomes, teacher engagement and, most importantly, their impact and influence on individuals, organizations and society.

In an ecology of openness, open pedagogy, learning outcomes, evaluation and assessment, the competences and skills of the 21st century should be emphasized, not just the content.

The increase in openness and open pedagogy has implications for the paradigm shift in education and for university reforms in the field of open and flexible learning. Online learning often refers to open online learning, so the ecologies of open online learning are examined below.

The Cape Town Declaration on Open Education, 10th Anniversary (2017) sets out ten directions to advance open education. One of these relates to open pedagogy. The others relate to open communication, empowering the next generation, connecting with other open movements, open education for development, thinking outside the institution, data and analysis beyond the textbook, opening up publicly funded resources and, finally, copyright reform for education.

Inamorato dos Santos et al (2016, p. 26) argued that:

> Openness in pedagogy refers to the use of technologies to broaden pedagogical approaches and make the spectrum of teaching and learning practices more transparent, distributable and visible.

They also argued that:

> Opening up pedagogical practices is about developing the design for learning in such a way as to broaden the participation and cooperation of all stakeholders. Pedagogical approaches with a focus on the learner are very suitable for open training. The aim is to open up the range of pedagogical practices through information and ICT (Information, and Communication Technology) in order to improve the effectiveness of learning design and increase student participation and collaboration. It is also about making pedagogical practices visible,transparent and accessible by providing the rationale for the learning design, assessments and learning outcomes. It also enables learners to design their own learning path by offering them a wide range of learning resources.

Although it is an important pillar of open education and open pedagogy, open content (Open Educational Resources (OER)) alone is not enough to make open resources easily accessible and available. Innamorato dos Santos et al (2016) argued that it is important to strengthen not only the use OER but also the Open Educational Practice (OEP) in creating a culture of openness. Despite research and the potential for capacity building of OER, there are still obstacles to the widespread adoption of open educational practices and culture. The framework for open education by Inamorato dos Santos et al. (2016) is linked to the concept of open pedagogy, described by Hegarty (2015), among others. Hegartys open pedagogy model is based on the connectivism described by Siemens (2005, 2017). Conole (2013) argued that open tools and processes should be based on five principles necessary for OEP:

1. cooperation and exchange of information
2. networked communication on learning and teaching
3. collectivity to expand knowledge and resources
4. criticism of the promotion of scholarships and 5. happy innovation.
5. serendipitous innovation

Weller (2014) examined four key areas that are central to the development of open education: open access, massive open online courses (MOOCs) and OER open scholarships. In examining the tensions in these key areas, he argued that ownership of the future of openness is important for everyone interested in education. In a study by D'Antoni (2008), awareness of open education was identified by many stakeholders as one of the most important issues. Furthermore, issues such as copyright, quality assurance, research and policy were not well represented in the data. Several researchers, such as Blessinger (2016), Bossu, Bull and Brown (2016), Inamorato et al., (2016) and Weller (2014), argued that OER MOOC and open licensing are seen as crucial for open education and open pedagogy.

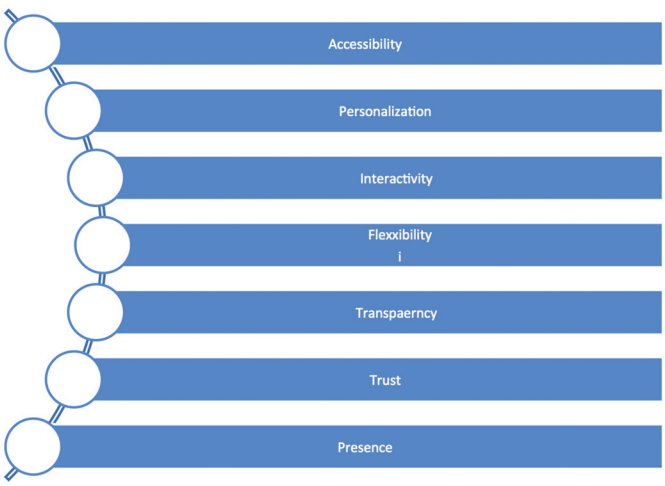
The open pedagogical approach focuses on learners and the essential attributes of trust, personal responsibility, peer learning, self-directed learning and creativity. Hegarty (2015) argued that it is not only difficult, but also not useful to separate the components of open pedagogy into clean, separate dimensions. Instead, the components of each of the eight dimensions overlap in many ways. It is impossible to discuss participatory technologies without mentioning innovation, trust, happy randomness, exchange, collaboration, connectivity, peer interaction and review, learner contributions and reflective practice. Furthermore, an open mindset and an open attitude are emphasized. She argued that a culture of exchange is essential for an open pedagogy, as we all learn in this new culture of connectedness and transmission. The open pedagogical model of Hegarty (2015) emphasizes eight characteristics: 1) participatory technology; 2) people, openness and trust; 3) innovation and creativity; 4) exchange of ideas and resources; 5) networked community; 6) learner-generated learning; 7) reflective practice; and 8) peer review.

Open pedagogy is not only a matter of pedagogy or the teacher's approach, capacity, and attitudes to learning. It requires systemic change, including the interrelationships and interdependencies among all components. Taylor (2016, p. 2) argued the following:

> [It is] an intentional process designed to alter the status quo by shifting the function or structure of an identified system with purposeful interventions... System change aims to bring about lasting change by altering underlying structures and supporting mechanisms which make the system operate in a particular way. These can include policies, routines, relationships, resources, power structures and values.

Open education and the merging of formal and informal learning in the movement towards open pedagogy will ensure that learning is possible for everyone at any time, by anyone and by any means. Challenged-based learning (Nichols & Cator, 2009), self-determined learning (Hase & Kenyon, 2013), and authentic learning (Herrington and Herrington, 2006) are corner-stones, and take place within the framework of open pedagogy. Characteristic of especially challenge-based learning is that it deals with problems that are of global importance, such as war or the sustainability of water. Learners explore the problem by looking at what is happening in the world around them and by strengthening the link between what they learn in formal education and what they perceive in their environment. In addition, challenge-based learning consists of acquiring the networking tools and media production techniques already used by many 21st century learners in their daily lives.

Quality related features in open online learning are described by Kear et al., 2016). They argued for the needs of a holistic approach, and consider both management (vision and strategy), products (curricula and course design and course delivery), and finally support (students and staff. When it comes to quality related features from the learner's perspective Ossiannilsson (2017, 2018) argued that personalization, interactivity, accessibility, and flexibility are crucial for quality in open online learning. Besides, transparency, inclusiveness, participation, trust, and presence are absolutely crucial, see Figure 1.



Fostering a culture of quality is crucial and must be in the interest of all stakeholders. It must also be empowered, promoted and encouraged by managers (Ossiannilsson, 2017, 2018). Inamorato dos Santos et al (2016) emphasized

leadership as a transversal dimension in the open educational framework because it supports OEP at different levels, such as personal motivation, task organization, cooperation and results management. They emphasized that leadership interacts with, influences and affects the other transversal dimensions, as well as the core dimensions in the open educational framework. Inamorato dos Santos et al, (2016, p. 29) argued this:

> Leadership in open education is the promotion of sustainable open education activities and initiatives via a transparent approach from both the top-down and the bottom-up. It paves the way to creating more openness by inspiring and empowering people.

Moreover:

> Leadership in open education goes beyond the creation of strategies and activities decided at an executive level. It is above all the identification of champions at different levels, both bottom-up and top-down, who will lead open education at the institution in different strands. It is a transversal dimension because it supports open education practices at different levels: personal motivation, task organization, collaboration and outcomes management. Leadership in open education should promote actions that enable the take up of open education across a university by a whole range of stakeholders, including learners.

The Commonwealth of Learning (COL) argued that in the culture of open education the position of educators and leaders should be examined in the context of the rapidly evolving global society (Brown, Czerniewicz, Huang, & Mayisela, 2016). Central to this objective is the need for all educators and managers to participate in lifelong learning and to understand the importance of positive personal and professional values, including effective reflective practices.

Alvesson, Blom, & Sveningson (2017) argued that leadership and management are critical to the success of transformation processes for all organizations, including universities.

In the 21st century, leadership, particularly in universities, must change direction to take account of the paradigm shift and the unbundling of approaches to opening up education. In order for leaders and managers to foster a culture of openness, it is essential to facilitate and empower capacity building by all employees and learners. Successful integration of technology requires resources such as infrastructure, support, incentives and continuous professional development and training for all employees and learners, for which executives and managers

must provide resources and funding (Arnold & Sangra, 2018; Ossiannilsson, 2017, 2018).

Leaders at all levels must pave the way for creating openness by inspiring and empowering their staff and identifying champions who will lead the institution to develop different strands of open education (D-transform, 2017). In this context, leadership therefore means building a work culture that embeds innovation and promotes open approaches to change. Leaders and managers need to be involved, committed, responsible and empowered to facilitate the digital transformation in order to promote cultural change among employees, learners and the organization as they lead the change. A key issue for leaders is to foster a culture that not only enables employees to grow, take responsibility and build trust throughout the organization, but also enables a culture of passion and perseverance (Ossiannilsson, 2017, 2018). Rethinking leadership and management at all levels will ensure that processes are resilient, agile and limitless, so that learners can embrace their learning in an open environment (Arnold & Sangra, 2018).

The implementation of an open pedagogy requires an agile and resilient approach, as it promotes and strengthens the sustainable individual responsibility for learning in a rapidly changing environment. Open pedagogy must therefore anchor, empower and maintain quality. Inamorato dos Santos, et al., (2016, p. 28) argued that quality in open education refers to the convergence of the 5 concepts of quality (efficacy, impact, availability, accuracy and excellence) with an institution's open education offer and opportunities. This is articulated as:

- Efficacy: fitness for purpose of the object/concept being assessed.
- Impact: is a measure of the extent to which an object or concept proves effective. It is dependent on the nature of the object/concept itself, the context in which it is applied and the use to which it is put by the user.
- Availability: this is a pre-condition for efficacy and impact to be achieved, and thus also forms part of the element of quality. In this sense, availability includes concepts such as transparency and ease-of-access.
- Accuracy: is a measure of precision and absence of errors, of a particular process or object.
- Excellence: compares the quality of an object or concept to its peers, and to its quality-potential (e.g. the maximum theoretical quality potential it can reach)

In terms of quality, it is important to promote a holistic ecological approach of openness and to take into account the ecological levels and ecology of open

pedagogy. Micro, meso and macro levels must also be considered. Quality dimensions refer not only to the efficiency, satisfaction and commitment of learners and faculty members, but also to the short and long-term impact on individuals and society.

Conclusions

This contribution has elaborated ecologies of open pedagogy, and some related dimensions, as open content, leadership and quality. The rising global challenges provoke universities in the present context. One of their main justification is to equip people for the age of uncertainty and to help tackle the major global challenges of this century. Young people need to be prepared to become thoughtful global citizens who can find creative and ethical solutions to the new and interconnected challenges of the 21st century, but also economically viable contributors. Throughout, it has been argued that open online education and ecologies of open pedagogy will empower and allow learners to take the lead in orchestrating their own learning.

As learning and teaching take new directions toward personal learning and learner-centered approaches, existing evaluation and assessment methods no longer will be applicable. Accordingly, evaluations and assessments will be transformed from focusing on content and facts to focusing on 21st century metacognition, skills, attitudes, and values.

There is no value in using old methods to measure new ways of learning, skills, attitudes, values, and knowledge. We can no longer educate people for a future that we cannot predict. Instead, we must prepare them for the uncertain contingencies of the 21st century.

Achieving the transition to an open online education and learning environment and meeting the global challenges beyond SDG 2030 and up to 2050 requires not only systematic changes, but also systemic changes and a rethinking of the role of education. As formulated in the UNESCO initiative "Futures of education": Education does more than respond to a changing world. Education transforms the world.

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CHAPTER 3

THE FLEX MODEL OF BLENDED LEARNING ENABLED DIGITAL CITIZENSHIP

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Introduction

The mass use of information and communication technologies has made educating digital citizenship one of the highest priorities in the world. In general, students spend most of their time with digital communities using personal devices like smartphones and tablets, which allows them to have a direct internet connection that can also lead to risk-taking endeavours (Dillinger, 2015). Such drawbacks and risks make it mandatory for a university to teach digital citizenship skills to students (Dillinger, 2015).

Due to the conveniently, work requirements, program requirements and flexible schedules, the invention of online education has encouraged more non-traditional students to have educational opportunities. Non-traditional students (e.g. prisoners, transients, workers) who attended university on a part-time basis make up a larger percentage of the overall student community of the undergraduate program (Miller & Yan Lu, 2003). Studies have shown that more people return to higher education, particularly after 35 years and 45 years of age. This finding certainly affects maintaining lifelong learning and rapid technological change in this context (Daiva, 2017). Therefore, the university must respond to this variation to prepare them for the world dynamic change.

Digital citizenship, according to Ribble, Bailey, and Tweed (2004), has to become one of the universities priorities, especially in the new dispensation of technological evolution. Universities have to begin admitting the integration of tech-

nology as a major teaching and learning strategy for preparing non- traditional students to be digital citizens.

Nowadays, a huge number of universities become using the blended learning approach to meet the needs of non-traditional students. The blended learning is a combination of traditional learning and technology-mediated learning, with more focus on online learning as defined by the Online Learning Consortium that the combination of face-to-face and online learning with 30-70% of an online content (Allen, Seaman, Garrett, 2007). The online learning environment offered by blended learning can be highly beneficial to non-traditional students to learn digital citizenship skills by integrating this digital environment into daily life experiences.

This chapter discusses the potential of using the flex model of blended learning to cultivating digital citizenship. The flex model is teaching methods for non-traditional students which allows them to work independently and learn to develop and create concepts in the digital environment. This model offers not only a convenient and flexible learning environment but also it allows them to engage on-site in aspects of digital citizenship.

Related Studies

1.1. Blended Learning

Blended Learning is a formal educational program where students learn in a supervised brick and mortar location away from home, at least in a part, with a certain element of student control over time, place, path and/or pace (Moiseienko and Ozarko, 2019). The blended Learning is defined as having between 30 percent and 79 percent of the course content delivered online (Allen, Seaman, Garrett, 2007). Blended learning is part of the ongoing convergence of two typical environments for learning. The first type, the traditional environment of face to face learning which exists for centuries. The second type, the distributed learning environments that have begun to expand and grow in ways that have increased the possibilities of communicating and interacting with new technologies.

Different types of blended learning are dependent on the level of technology used. The following chart shows four blended learning models that classify most blended learning programs. (Staker and Michael, 2012):

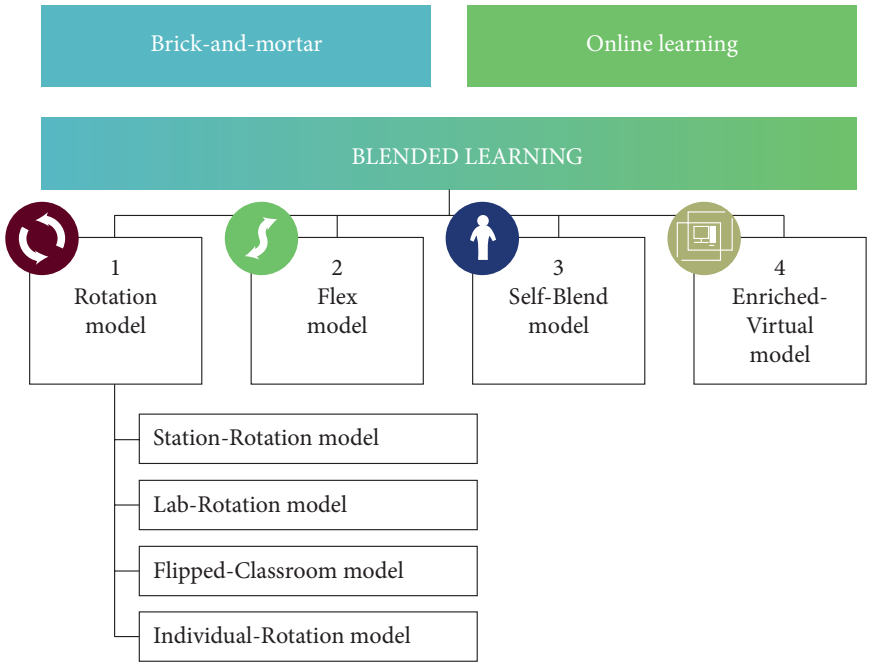


Figure 1. Blended-learning taxonomy

These four models were described as below by Beaver, Hallar, Westmaas, and Englander (2015) explaining how each model incorporates in its approach all elements of a blended definition.

1.1.1. Rotation Model

Students in this model rotate between paths of learning or "modalities," one of which is online learning, either on a fixed schedule or at the discretion of the teacher. In practice, these rotations may mean that a student stays at their desk, but switches between a paper and pencil instruction and online learning on a tablet or a laptop; they may also involve students trading on a computer in the classroom. In this model, for example, a flipped classroom is used, in which students participate in the online learning process to access the content they need to study and then attend face-to-face school for teacher-oriented practice or projects.

1.1.2. Flex Model

The flex model features learners working on a custom timetable rotating among modalities, one of which is online learning. The flex model is not fixed but fluid, enabling adjustments in schedules in real-time to satisfy the ever-changing learning requirements of students.

1.1.3. "A La Carte" Model

The a la carte model also called the "self-blend" model, enables learners to design their learning experience through the selection of particular online classes to complete their traditional work in school. Regarding the online learning component, the teacher is virtual and the study takes place at school or abroad. This model could be used if schools do not have certain on-site classes.

1.1.4. Enriched-Virtual Model

This model mainly enables students to learn online but splits their time between the brick and mortar school and off-site. It is a ' full school experience ' and therefore a comprehensive education approach (in contrast to the study approach of flex and la carte models). It is an experience for the whole school world. The teachers-of-record are mainly virtual, but students also provide additional assistance in the brick and mortar setting.

1.2. Flex Model for Non- Traditional Students

This model provides content and learning mainly via internet, students follow a custom-based, fluid schedule between learning modalities and a teacher-of-record is on-site (Staker and Michael, 2012). According to Moiseienko and Ozarko (2019), the flex model can be defined as follows:

1. A course or subject that based on online learning, even though it sometimes leads students to off-line activities. This allows students and teachers to gain more control on time management: teachers have time to work with students individually, because they usually no longer stand before the class and students may take classes and materials in their place.
2. Students move through individually tailored and fluid schedules between learning modalities, allowing students to work independently and to receive teacher support where necessary.
3. The teacher provides flexible, adaptive support through activities such as small-group teaching and group projects. Some implementations have significant face-to-face support, while other implementations have minimal support. Teachers provide flexible, appropriate support and instructions to their students during their work on curricula and content. This model allows students to have a high level of control of their learning.

4. The most of assignments are completed online with this student-oriented option of the flex model in blended learning. For instance, a student starts with a list of such curricula. He or she takes a proficiency test. Additional assistance is provided, if necessary, as an enrichment. Therefore, students work in their place through the curriculum and can spend as little or as much time on a specific concept (Moiseienko & Ozarko,2019).

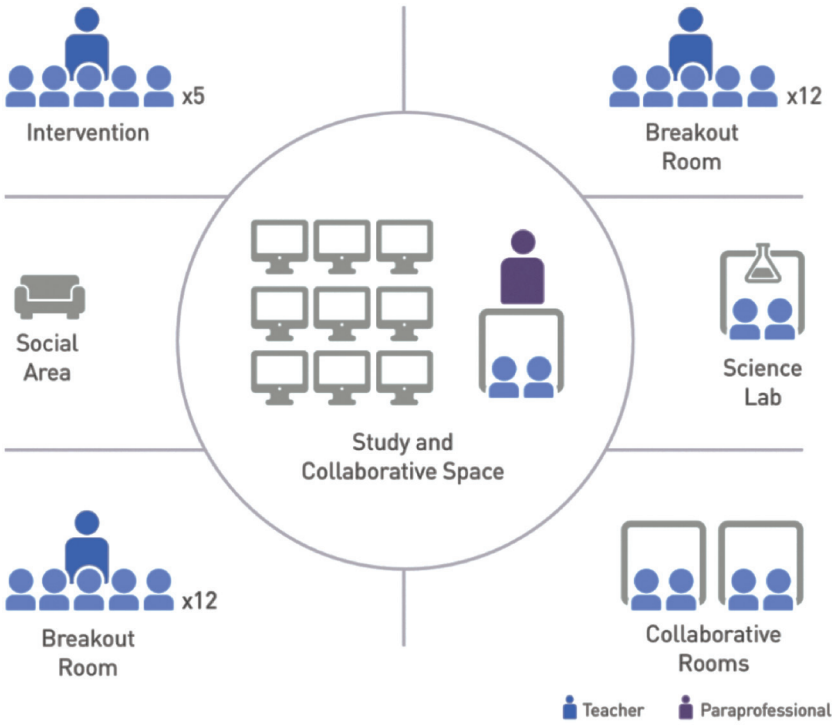


Figure 2. Flex-learning Flowchart

The non- traditional students who return to school later in life, work, need to balance learning process with work and families responsibilities. This model provides the universities with better flexible, customization and potential cost efficiency to respond to the demands of non-traditional students. Students who are returning to school later in life, who hold jobs, have to balance coursework with caring for families, or former members of the military embarking on new careers.

1.3. Non-Traditional Students

A NEC defines non-traditional students as having a feature of seven: delayed enrolment in post-secondary education; partial college time; full-time work; financially independent, financial support; has dependents other than a wife; is a single parent, or is not qualified in high school (Pelletier, 2010).

According to Daiva (2017), the concept of non-traditional students is related to age, but, unquestionably, age is the single criterion that the student describes. Researchers consider the age of non-traditional students as one of the principal criteria of definition. The age limit supported by the vast majority of the authors, however, is 25 years old. However, younger students can also regularly work full time during their college years, as well as have childcare and successful completion of undergraduate studies.

1.4. The Digital Citizenship

According to the Common Sense Media White Paper (2011) digital citizenship is the ability to competently use technology; to interpret and comprehend and evaluate digital material; to produce and research and to interact with relevant tools; to critically address the ethical and challenge problems of a digital globe; to make secure, responsible, and online, respectful decisions to understand digital people and digital features.

Buente (2015) defined the Digital citizenship as those who make everyday use of the Internet because regular use needs certain means of access (frequently at home), technical skills and learning skills in the task of discovering and using data on the internet and interacting on the Internet with others. Nine digital citizenship elements provide a framework for understanding the technical issues that are important to educators. They should be used to identify current need areas in a school or a district technology program and new problems that may become more and more relevant in the coming years.

Rible, Bailey & Ross (2004) identify these nine general areas (elements) of behaviour that make up digital citizenship.

1. **Digital Etiquette**: electronic standards of conduct or procedure
2. **Digital Communication**: electronic exchange of information
3. **Digital literacy**: the process of teaching and learning about technology and the use of technology
4. **Digital Access**: full electronic participation in society

5. **Digital Commerce**: electronic buying and selling of goods
6. **Digital Responsibility**: electronic responsibility for actions and deeds
7. **Digital Rights**: those freedoms extended to everyone in a digital world
8. **Digital Safety**: physical well-being in a digital technology world
9. **Digital Security** (self-protection): electronic precautions to guarantee safety.

2. The Role of Flex model for Cultivating Digital Citizenship :

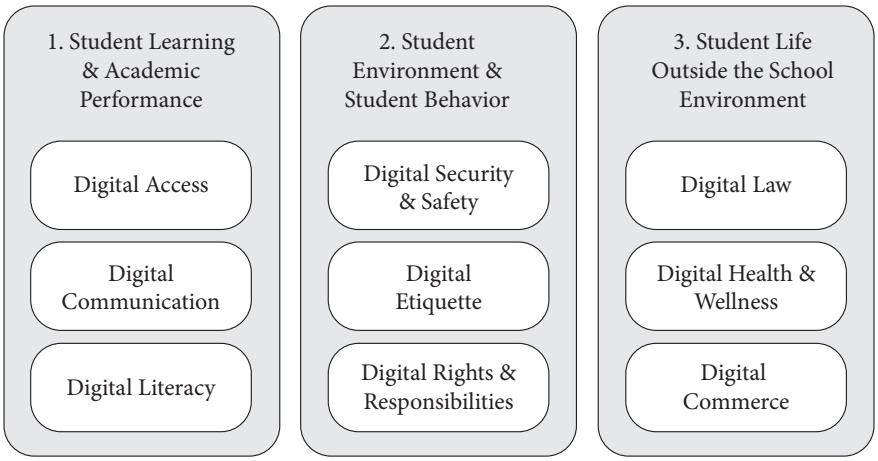
Due to the dynamic nature of our world and the importance of technology in modern life, it is critically significant for non-traditional students to learn digital citizenship skills to ensure success both in life and work, so they need to be able to navigate and engage intelligently in digital settings.

Flex Model is already conducted mostly through the means of technology. It therefore sets up as an effective environment to introduce digital citizenship education. Thus, in the case of integrated digital citizenship education into the Flex Model as teaching method, it will provide the students guidelines and skills to practice safe Internet behaviours. This will be applied both in the school environment and at home atmosphere.

Schools that offer blended learning opportunities can work better regarding the advantage of their students. The learning environment where technology is used regularly makes it easier to incorporate digital citizenship skills into teaching. This can be done through the adaptation of online courses and assignments.

2.1. Ribble's nine elements of digital citizenship:

The elements of Ribble provide a helpful structure to have better understanding about the key components of digital citizenship. These elements have become a slandered component of international digital citizenship curricula. The following examines each single element separately and discusses the role that flex model might play in cultivating digital citizenship skills.



Digital Citizenship Touchpoints (Ribble & Bailey, 2007)

- **Element 1 - Digital Access**

The opportunities of access to all the new digital society's tools are not equal to all students or teachers because of socio-economic status, disabilities and the physical situation (including other factors). Providing students with access to these technologies is part of Flex Model for delivering online content to all students. Schools has to provide an appropriate atmosphere for digital learning to take full advantage of the Flex model. This can be done by establishing digital study laboratories and ensure that all students have access to digital tools.

- **Element 2 - Digital Communication**

Digital communication involves all electronic media, such as cell phones, social networking, emails, and texts, through which individuals can communicate (Couros & Hildebrandt, 2015). Whereas any of these tools might be misused. Some individuals submit e-mail, text, or messages regardless of the privacy or interpretation. This implies that users must consider what they say to interact with others by using these tools. The students can learn how to communicate effectively through the communication tools that are being used in Flex model as part of the online learning environment such as (mobile, email, skype, social network). They will learn how to use these tools appropriately to support their learning activities. as students will become responsible for learning process as well as they will have luxury opportunity to learn at their own places online and have available teachers in-person to deliver small group instructions.

- **Element 3 - Digital Literacy**

Digital literacy describes the method of learning about the appropriate and inappropriate use of technology (Ribble, 2011). Digital literacy includes skills such as information search, website content evaluation, network collaboration and the abundance of online information (Couros & Hildebrandt, 2015). The flex model allows the student to practice in real-world contexts, where students acquired digital literacy skills as they studying online and they create the digital contents or even access these contacts away from the university.

- **Element 4 - Digital Etiquette**

Digital etiquette defines behaviour norms in the internet or technological areas. Such rules are often unwritten and change rapidly with the availability of new technology and they can differ greatly between the online areas, or between the different groups of users. Different generations have widely divergent opinions on what is known as polite, for example, when talking face to face while using mobile phones (Couros & Hildebrandt, 2015). Students through Flex model will have the opportunities to learn the online-behaviours rules and policies with the aid of the teacher. For instance, Students work with their teachers to understand what and where information can be shared. Users learn the rules of the group before being involved in the conversation when communicating in a chat room (Ribble, 2011).

- **Element 5 - Digital Law**

Digital law relates to the legal obligations of our online activities. It involves issues as the exchange or use of copyright products, system hacking, theft of digital identity, or the publishing of illicit pictures (Couros & Hildebrandt, 2015). The Flex Model teacher acts as a mentor who guides the students to use digital resources. For instance, He or she can guide them regarding the free access resources copyrighted content and its policy, in addition to awareness of the sharing inappropriate content.

- **Element 6 - Digital Rights and Responsibilities.**

Digital Rights and Responsibilities refer to those requirements and freedoms in the digital world that are extended to everyone. As a full member of a digital society, each user has certain rights granted equally to all members (Ribble, 2011). Through online learning environment as part of flex model, the teacher guides the students to use the online material ethically including information citation, and students' rights and responsibilities in using digital technologies.

- **Element 7 – Digital Health and Wellness**

Digital Health and Wellness are described as physical and psychological well-being in the digital technology world (Ribble, 2011). Physical considerations can involve potential health risks due to the overuse of technology such as the syndrome of carpal tunnel, eyestripe, and poor posture. Failure to do so may also have physical consequences if students spend too much time on sedentary activities with technology (Couros & Hildebrandt, 2015). The Flex Model is an appropriate learning environment for teachers to promote health and wellness with digital tools. This can be done by designing a model for digital safety in the classroom where each student has a computer to work on in brick-and-mortar campus and encourage them to do the same. In addition to conducting annual awareness campaigns using the online learning platform of the flex model about the health risks of overuse of technology.

- **Element 8 - Digital Security**

Digital safety concerns such policies and steps to be taken by people to ensure their online safety. This refers to protecting data (e.g., using virus protection software, erecting firewalls, and making backups) (Ribble, 2011). Students' failure to adequately protect their data and passwords in the flex model online environment might endanger the whole University for viruses and hacking. Therefore, The University that uses flex model is obligated to teach students to be aware of phishing scams and to use strong passwords, protect their identity online, keep their devices secure against viruses up-to-date and back up their data.

- **Element 9 - Digital Commerce**

While this aspect of digital citizenship might appear to be not school-related, it is significant to recognize that students are increasingly involved with online marketplaces; digital commerce refers to electronic purchasing and selling (Ribble, 2011). Students in the flex model may have the required skills to be responsible online consumers as well as most of the online learning process and all assignments completed online. This makes it easier to integrate online shopping in the learning process and give instructions on how students can purchase items online safely.

Conclusion

In the rapidly growing of using online and blended learning by the universities and schools, the concept of digital citizenship is becoming more a driving force behind the way our teachers and students use technology for learning

(Sheahan,2014). Flex blended learning model provides students with a convenient way to learn digital citizenship as well as an online platform that encourages students to participate in reality aspects of digital citizenship. Flex blended learning is the most appropriate teaching method embracing digital citizenship to reach non-traditional students. As these students have no other opportunities to learn these skills.

The opportunities exist for the inclusion of digital citizenship education in the flex model. It must, however, be mentioned that there is also a need for clear digital citizenship guidelines that should provide students with clear and easy-to-follow instructions. The instructions will be on how to earn the required digital citizenship skills and competencies in the peculiar online learning environment offered through the flex model of blended learning. The teacher available on site to give support and instruction to students need training on these guidelines and how to the online learning environment can be used to cultivating digital citizenship for non- traditional students

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CHAPTER 4

PEDAGOGICAL APPROACHES IN ONLINE LEARNING

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Introduction

The emergence of new technologies and education's being influenced from those technologies has caused new tendencies in learning-education manners. Following the technology use in the classroom in traditional educational methods; the education manner has been extended out of the classrooms to the virtual media. When the teaching through those virtual media succeeds in, development studies for those teachings continued. The teachings on virtual media that is developed parallel to the technology are more successful day by day as well as being more practical. "Online Learning" concept which occurred due to the needs in the past is being used effectively today and continues to renewing every day. There are some paths to follow in every type of teaching model which are planned and programmed. As in everything that is fast developing and renewing, new concepts and methods have arisen through the development of online learning. Although some of the methods and techniques used in traditional teaching are suitable in online learning manners, there are methods and techniques used only in online learning.

In this section of the book; teaching, learning, teaching types on electronic media, online learning, pedagogy and pedagogical approaches used in different teaching manner through online learning have been mentioned.

Online Learning

As the concept of online learning began to be used often, to understand and explain what the online learning is and what it covers has been difficult (Edumadze, Ogoe, Essilfie, Edumadze and Graham, 2017). According to the conflicts occur in defining online learning, it is better first to understand what the online

learning is not instead of what it is. The online learning is not a second class teaching that is applied for within formal education or open plan teaching systems (Rakototiana and Gottot, 2017). Additionally; the online learning is an educational system having the most modern equipment where the newest testing and evaluation methods are used by advanced countries for many years (Holmgren, Haake and Söderström, 2017).

Although the first signs of online learning has started three decades ago (Gursakal and Bozkurt, 2017), it started with a letter in 1830's. It started from a school sending letters to some specific houses or places to provide teaching. Generally people who had physical difficulties and could not go out of the house benefitted from this technique but also people who were working or armed forces were using it to get certificate (Demiray and İşman, 2001).

As well as the development of communication tools the tools used in online learning have changed which paved the way for its own development. In time radios, televisions and the Internet has replaced the letter (Sumner, 2000). As the radios and televisions replaced the letter, through the radio auditory teaching, whereas through television both auditory and visual teaching have started which means a wonderful improvement for the online learning. Since a specific budget was necessary to own a television and radio in those times, everybody would not be able to benefit from that auditory and visual online learning as well as obtaining the certificates, however; nowadays those tools are reachable and affordable so that everybody can benefit from those opportunities (Casey, 2008; Peter and Deimann, 2013; Nunn, 2014).

In conjunction with the Internet entering in our lives and began to be used daily; the online learning began to resemble to the traditional education in terms of pedagogical approaches and concepts. Asynchronous and synchronous education have been held through the Internet, at the same time; virtual classrooms are formed on those media and pieces from traditional education to online learning began to join (Bicen, 2012). While, pieces from traditional education occur in synchronous education; the advantages and difference of online learning occur mainly in asynchronous online learning model (Barış and Çankaya, 2016).

The online learning continues today by developing. The most generally; online learning through the Internet has been more widespread as every individual has easy Internet connection and a mobile device. Out of the classroom environment was first mentioned as "independence from the location" in online learning through the Internet, however; this concept today refers to every place with mobile devices having an Internet connection because people have mobile devices

with uninterrupted Internet connection thanks to mobile Internet connection instead of only mobile devices (Bicen and Arnavut, 2015).

On the other hand in Turkey the online learning concept was first used in the first quarter of 20th century. Online learning was used only as conceptual in the middle of the 20th century but started to be benefited and used since the beginning of 1960's. It was first a trial experience but after 1980's it was able to reach greater masses by being developed.

Synchronous (Synchronic) Education

In general terms, online learning is divided into two. One of them is synchronous or synchronic education. Like its name; it occurs when the teacher and learners are in different places but being in the same educational manner at the same time. The lesson time in synchronous education is determined previously and notified to the learners and all the learners come together in the same manner at the same time (Işık, Karacı, Özkaraca and Biroğul, 2010).

The synchronous education can be done through different applications and methods. For example; it is possible to have a synchronous education by using social media tools or virtual classroom applications. The media such as Skype or WiZiQ can be examples for this. (Morkun, Semerikov and Hryshchenko, 2016).

Chen, Ko, Kinshuk and Lin (2005) have summarized the advantages and disadvantages of synchronous education as following:

Advantages;

- Real time discussion and brainstorming manner is formed,
- There is an instant feedback opportunity,
- Student has less isolation,
- It removes obstacles related to the place.

Disadvantages;

- Setting lesson time for everybody might be a problem,
- There is an invigilation problem during exam assessment,
- In different group works, the necessary technological tool possibility might not be provided,
- The learner may not attend to the discussion in every moment,
- In crowded classrooms, the learner has only a listener role,
- The students who aren't reconciled with technology remain passive.

Asynchronous (Non-synchronous) Education

Asynchronous or non-synchronous education contrary to the synchronous education; does not require teachers and learners to be in the same manner at the same time on different places. In this type of education it is not necessary to enter in a previously determined time to an educational manner. After the teacher uploads the lesson sources or materials to the manner, the learner can enter and follow the lesson in desired time. This removes the time obligation (Şenkal and Dinçer, 2012).

There are much environment to hold the asynchronous education. One of the most preferred is lesson management systems. Those systems are very suitable for the asynchronous education and are the most used ones. They are not only for the asynchronous education but also synchronous education however they are more preferred in asynchronous education. The most preferred lesson management systems that teachers and learners have different permissions are the Moodle media (Özçınar, Ekizoğlu and Kanbul, 2016).

Taylor (2002) has summarized the advantages and disadvantages of the asynchronous education as follows:

Advantages;

- Place and time difficulty disappears,
- Everybody has the opportunity to participate,
- Education has an international identity,
- Student can participate to the lesson and discussions when they wish,
- It increases the lesson participation of students who are shy and have weak communication.

Disadvantages;

- It causes a virtual and scattered learning community,
- It isn't suitable for applied courses,
- It depends to external factors in invigilating exams,
- It might cause isolation effect on students,
- There isn't an immediate feedback.

Blended Learning

Ünsal (2012) has defined the blended learning as a learning program prepared especially and specifically for a specific group on the 'average' level through combining technologies, activities and tasks which are different learning approaches'. Whereas Usta (2007) defines it as an educational approach that benefits from all aspects of technology and combines the various models of online learning and face-to-face learning in a classroom environment. In general definition the blended learning is using method-technique and materials all together in education. The word "Blend" which means "mixing, combining" is seen in literature with the name of "Blended Learning" (Güler and Şahin, 2015).

Nevertheless the definition of blended education is done differently by many researchers and those researchers agree on the expression of "combining the Internet based education with face-to-face education done in the traditional classroom environment" for the blended education. Also; the accepted description in literature about the blended learning method is "implementing the % 30- 80 of lesson contents as online through various tools, in the remaining time it is implementing the traditional learning method" (Allen and Seaman, 2014; Porter, Graham, Spring and Welch, 2014).

Media that Online Learning Takes Place

Learning Management Systems

The concepts such as; computer aided education, computer based education, web-based education, Internet aided education and web aided education occurred after they were used in educational manners. The learning management systems developed regarding to those systems are the systems providing individualization of learning and teaching process that permits the lesson contents to be organized by the teacher (Dalsgaard, 2006).

The most known learning management systems are; Moodle, Edmodo, Blackboard. And the most used system is Moodle (Hu, et.al., 2016). Moodle is an open source coded system and therefore provides advantages for the users. Some of the advantages of open source coded systems are as follows; (Aydın and Biroğul, 2008);

- Independence from the manufacturer company,
- Reliability,

- Sensitivity and flexibility,
- Supporting the novelty,
- Security,
- There aren't any fees such as hardware, software, supporting, personnel expenses, etc.

On an open source coded learning management system; one can share any type of digital material with the students as well as having settings such as; virtual class formation, creating questionnaire, creating exam, making course registration settings, following the learners, determining the authority of the learners, etc. (Özarslan, 2008).

Social Networking Sites

Within the appearance of Web 2.0 tools; the social networking sites have been another novelty in human life. The social networking sites give opportunity for the Internet users to create private or semi-private personal web media. The users on those sites have the right to share any kind of their personal multimedia files with the people on social media. Also, the users can create pages and groups related to their aims (Soto, et.al., 2016).

Those created groups and pages can be set as private, semi private or completely open to everybody just like personal media. Those groups can be opened specially for a classroom students, sports team players, course participants, any students studying at university which can create easy communication among them (Reinhardt, 2017).

The social networking sites will be used either as an educational media on their own or the support for educational media or as sharing and interaction manners for the users (Şahin, Kaynakçı and Aytop, 2016). A group to be opened on social networking site can be completely special for the learners and the materials can be shared easily or they can be used to meet the educational needs and just to support through communicating with the groups on that media (Ponte and Klein, 2017).

Since the social media is private for individuals and have educational aims; accessing to the users through those media is easier than using only the educational media (Kitsantas, Dabbagh, Chirinos and Fake, 2016). Therefore, the social networking sites are generally used as interaction media to support the educational media (McCarthy, 2015).

Education-Learning Process

What is Online Pedagogy?

Scientifically one questions what the value of pedagogy apart from the other sciences is. Pedagogy is nearly the theory of educational implementation. Since each implementation requires a theory, the base of the education is pedagogy. Therefore, compared to the other sciences it relates only theory. This means it does not have a philosophy subject but it has science theory. Since learning and behavior and suitable teaching and education is peculiar to individuals, the pedagogy tends to meet the needs of human nature which means it is a science that analyzes the problem of what is human?

As a science, the pedagogy searches for principles and how the teacher-student relationships should be. It is necessary for all the problems related to humans. According to Herbart pedagogy is a science related to philosophy and psychology. Philosophy shows the target of teaching whereas psychology shows the path of this target, tools and possible limitations. Without these issues, there is not a teaching topic where the individual is not able to establish a bond between reality and personality. The interests and benefits cannot replace the individual's bond. The regulatory principle that will be accepted generally is not included here. The pedagogy has to deal with the human actions and it presents educational principles related to those actions by considering all the reality. The main characteristic of pedagogy is to analyze its own topics with psychology and all other sciences and philosophy in terms of teaching their problems, learning and education. So that it presents that relationship completely. In terms of education it can also create integrity of all occurred problems because the human is related to life and every part of the science. That is why; which scope will the pedagogy tend to and how to deal with cultural and social order in pedagogical problems are detected. The main target for education and teaching is the society itself whereas it can be the base for pedagogical action, culture and tradition. According to pedagogy culture and traditions gain value only when they lean towards new activities, greater aims and better humanistic objectives. That is why all of them are in the hands of society because the real culture takes it as a measurement; it isn't in a random creation. With regards to this; all the conflicts of pedagogical moral and psychology has a very different face. Psychological problems' being various requires the analysis of teacher-student relationships in many aspects. All of those are presented in tangible and specific rules and formulas. Pedagogically, the moral conflicts in terms of teacher-student relationship have new shape. There isn't any implemented moral or psychology

here. Only new and suitable rules are looked for. Also; action analysis is done through teacher-student relationship. This analysis deals with all education and teaching problems and also the integrity of personality as a soul and body. It covers all the physical aspects in its scope. Therefore, the bond of educational manager and the teacher who wants to learn how to do it occurs. The teacher is seen as the responsible person and is accepted as model for the student in each action. In the developmental psychology that is based on child-adult relationship; there is a pedagogical theory as in doctor-patient relationship or person's own relationship with him or herself. While the pedagogy analyzes teacher-student relationship it shows this relationship openly with its all features. Pedagogy science relates to a specific world view and it is developed everywhere in terms of this world view.

The absolute educational experience transmits from one generation to another through personal experience, implementation, observation, success and failure. The changes in family structure, the decrease in children number in families and various changes that society faced have also changed the education and caused educational etiquette which is gained by experience to be insufficient. The educational advices of parents and adults might only provide clues about the things learned through education. The first step of this is; the pedagogy has to be a teaching topic of general education where the pedagogical idioms and formulas are insufficient pedagogically. Teaching the history of pedagogy or educational art shows that the pedagogy is very necessary for theory which will be taken as the base for the implementation. Definitions such as; educational knowledge and teaching methods show that this knowledge has become a lesson topic now. Some of the historical information doesn't consider what the needs for making pedagogy and its functions in order to be a lesson topic are. Since the 18th century; the course books about the pedagogy have covered academic or vocational teaching which means people should accept that it is the result of pedagogical job teaching and it aims for it. On the other hand, this situation caused the pedagogical information like job information to be underrated and it also caused limitations and simplifications in teaching and press area which is against the pedagogy. The history of absolute scientific effort in educational sciences is very new and pedagogy is still struggling in order to be accepted as a teaching and course topic in the scientific world.

As a result of historical development within the frame of requirement of time, pedagogy is a lesson topic in various places. In most countries; the educational teaching is used in schools as part of mother education. It is also covered in general education as teaching topic in social analysis, vocational and mastery schools. It is always covered in various science institutions, educational journals, radio or

similar press organs. It is the main teaching topic in teacher schools, various graduate schools, universities and institutions that educates people for social pedagogy jobs such as child raiser or youth raiser, etc. In some graduate schools and institutions it is taught as research topic without job preparation aim directly.

In online pedagogy; the theory and implementation relationship and connection of pedagogical information with life experience causes some difficulties for students. In order to provide this information, the student must have reached a growth level. Although the pedagogy as a lesson topic has earned something for job education, it may not guarantee for anything. The scientific openness and certainty is also necessary for this area. Regarding to this; only close measured developments have been able to be provided. A pedagogical lesson which is not related to the real life might become an overload instead of a profit.

Constructivism Theory

The behaviour and learning can be predicted to be based on rules and also the learner not having any control on learning (or very less control). When the behavioural learning theory and cognitive learning theory are considered to be under the unchangeable conditions; some of its factors can be said to be determinant. However, the constructivists emphasize the influence of awareness, free will and social effects on learning.

The outer world then is interpreted in terms of this private world. Being existed for a long time; the belief of active and free wealth existence originating from human's personal meaning search is an important part of constructivism.

The constructivists believe that in its nature the knowledge is subjective and are accepted mutually as a result of our perceptions' agreement. According to this opinion; people do not obtain the new information through transferring from knowing to unknown or either by memorising, on the contrary, they build new information in other words they create. The constructivists believe that the meaning or understanding occur when the information is assimilated and related to our existed information on the condition of processing it cognitively (in other words thinking or reflecting on the new information). The social constructivists believe that this progress is shaped the best through discussion or social interaction, therefore we compare the rightness of our understanding with others' and then we reach the result. A constructivist believes that even the physical laws exist due to the specific groups (here the example is scientists) have a common conclusion about what the valid and correct information is and also those rules' being

created by humans through proof, observation, deduction, reasoning and intuitional thinking.

The constructivists defend that they are on a conscious meaning search with the aim of giving meaning to their environment according to the individuals' past experience and current status. This is actually a reconciliation effort of the outer reality with their previous experiences and also analyzing the conflicts as well as creating an order from the disorder inside their minds. This effort is actualized from personal reflection to searching for new knowledge in social connectivity of ideas with others through a complicated and multi-dimensional process. On the condition of the discovery of relationship between the known and new, the existence of similarity and difference and testing the assumptions; the problems and conflicts reach the solution. The reality is always dynamic and uncertain.

One of the outcomes of constructivist theory is that each individual is unique. The reason of this is; the individuals in their interactions use their own different experiences, therefore their search for their own personal meaning results different from everybody. Hence, the behaviour is neither predictable nor determinant at least on individual level which means this is the most important distinguishing feature of constructivism from cognitivism. The main point here is that; according to the constructivists the learning is a social process that requires communication and interaction among learner, teacher and the others. The technology can not replace this social process but only makes the process easier.

For most of the educationist the social bond of learning is essential. The ideas are not only examined by teachers but also students, friends and colleagues. On the other hand, the knowledge is obtained through social processes or socially structured institutions: schools, universities and mostly today the online communities... Therefore, the knowledge that is qualified as 'valuable' is actually structured socially.

The constructivists believe that learning is a continual and dynamic process. The understanding of concepts or principles develop in time and deepen. For instance, one can understand the concept of heat only by touching. As growing up, s/he understands that the heat is a measurable and quantifiable concept: just like the -20 C° is very cold, as s/he learns the Science s/he begins to perceive heat differently. Firstly, as an energy transfer and then an energy form that is related to the movement of atoms or molecules... Every 'new' component should integrate with the previous comprehension or meanings and also with other related concepts.

Therefore, the "constructivist" teachers give importance to the learners to improve their own understandings through structuring the reflection, analysis and

information layers by conscious and continual mental process as incrementally. The reflection, seminars, discussion forums, small group works and projects are the main methods used to support constructivist learning on campus education. The online cooperative learning and implementation communities on the other hand are the prominent constructivist methods used in online learning.

On the condition of using some steps or the process determined previously by 'experts', although it is possible to approach the problem solving through objectivist view; a constructivist approach can also be used. The problem solving on a constructivist approach can show itself on various densities; firstly by the guidance level of the teacher, secondly the teacher's presenting guide principles for problem solving without no intervention, thirdly directing students toward brain storming on the issue without directing them towards the possible information resource. The students hold group work, help each other and compare the solutions they found for the problem. There might not be an only one "right" solution for the problem but they result in that some of the solutions is more 'suitable' than the others within the light of the success criteria determined for that solution.

As it is seen, there can be 'degrees' of constructivism. The teacher can help to direct the process for obtaining the 'suitable' outputs first by taking him or herself into the center. The main difference here is that; the students have to work and put effort in order to create their own meanings, to question it according to 'reality' and as a result to structure the meaning.

Apart from the behaviourists the constructivists approach to technology closer. In a constructivist perspective; the brain is more flexible ad complicated than the current computer programs and it has more adaptation ability. Feeling, motivation, free will, values and all the humanistic feelings make learning more different from the computer operation. Based on this opinion, one can say that: when the computer scientists create software they should not restrain the learning in the current limitations of behaviourist computer programmes but they should work on reflecting how the learning process of humans operate and also support the learning which means more contribution to the education. Although the constructivist approaches can be implemented to all knowledge areas, it is more active in human sciences, social sciences, education and less quantitative subject areas.

Social-constructivist online education pedagogies, not coincidently, developed in online education in conjunction with the development of affordable many-to-many communication technologies. Beginning primarily in the 1980s and flowering in the 1990s, rather than transmitting information, technology became widely used to create opportunities for both synchronous and asynchronous

interactions between and among students and teachers. Michael Moore's famous theory of transactional online (1989) noted the capacity for flexible interaction to substitute for structure in online-education development and delivery models. A number of researchers noted the challenges of getting this mix of potential interactions right (Anderson, 2003; Daniel & Marquis, 1988). Social-constructivism does not provide the detailed and prescriptive instructional design models and methodologies of CB driven online education. Nonetheless, there is a need for coherency among underlying psychological and philosophical assumptions, and the goals and design criteria for learning activities, if pedagogy is to evolve beyond the philosopher's chair and into the real world of online education. Wilson (1996) defines social constructivist learning contexts as places "where learners may work together and support each other as they use a variety of tools and information resources in their guided pursuit of learning goals and problem-solving activities. Social-constructivist pedagogy acknowledges the social nature of knowledge- its creation in the minds of individual learners but its instantiation in the practice and culture of groups. Teachers do not merely transmit knowledge to be passively consumed by learners; rather, each learner constructs the means by which new knowledge is both created and integrated with existing knowledge. Although there are many types of social constructivism (Kanuka & Anderson, 1999), all of the models have, more or less, common themes, including the importance of:

- New knowledge as building upon the foundation of previous learning
- Context in shaping learners' knowledge development
- Learning as an active rather than passive process,
- Language and other social tools in constructing knowledge
- Metacognition and evaluation as a means to develop learners' capacity to assess their own learning
- A learning environment that is learner-centred and recognises the importance of multiple perspectives
- Knowledge needing to be subject to social discussion, validation, and application in real world contexts (Honebein, 1996; Jonassen, 1991; Kanuka & Anderson, 1999).

Connectivism Theory

Connectivism Theory is a concept suggested and needed due to the educational technologies developed in 21st century (Downes, 2007). The connectivism explains learning through networks (Downes, 2008). It comprises the chaos

theory, the importance of networks and the order of disorder ideas combination (Siemens, 2004; Downes, 2009). According to this theory, the information on the Internet is very scattered and they can be worse just like nodes. Those nodes come together, form the network and the more the bond among them are stronger, the information exchange is stronger. Within the combination of nodes which are from smaller webs, the greater nodes occur. According to connectivism theory; the information on the networks are scattered and the surfing ability of a learner on those networks is parallel to their learning rate. The autonomous, self-directional and self-managed learners create their own learning areas by surfing among the networks according to their own needs (Siemens and Downes, 2008).

The principles of connectivism theory are as follows (Downes, 2011).

- Learning and information is in the variety of ideas.
- Learning is a connection process of specific nodes or information resources.
- Learning, can be actualized on nonhuman applications (situations or environments).
- Learning capacity is more important than the surrent known.
- We must continue and feed learning in order to provide its continuity.
- Being able to see the connections among areas, ideas and concepts is a main ability.
- The aim of all connecting learning activities is correct and up to date information.
- The decision making process itself is a learning process. Deciding what to learn and the meaning of the new information might change according to the opinion of altering reality. The correct thing now can be wrong tomorrow due to the changes that affect our decisions on the information media.

However, like behaviourist/cognitivist and social constructivist models, there are several variations and flavours of the general model that might include those relating to networks of practice (Wasko & Faraj, 2005), networked learning (De Laat, 2006), and emergent Learning (Kay & Sims, 2006), and it draws heavily from fields such as distributed cognition (Pea, 1993), constructionism (Papert & Harel, 1991) and communities of practice (Wenger, 1998). Connectivism was developed in the information age of a networked era (Castells, 1996) and assumes ubiquitous access to networked technologies. Connectivist learning focuses on building

and maintaining networked connections that are current and flexible enough to be applied to existing and emergent problems. Connectivism also assumes that information is plentiful and that the learner's role is not to memorize or even understand everything, but to have the capacity to find, filter and apply knowledge when and where it is needed. Connectivism assumes that much mental processing and problem solving can and should be off-loaded to machines, leading to Siemens' (2005a) contentious claim that "learning may reside in non-human appliance". Thus, connectivism places itself within the context of actor-network theory, with its identification of the indiscriminate and overlapping boundaries between physical objects, social conventions, and hybrid instantiations of both, as defined by their initial and evolved application in real life (Latour, 1993).

While a great many speculative and theoretical papers have been written on the potential of connectivism (see for example special issue on Connectivism in IRRODL, 2011, edited by Siemens and Conole), most reports of experience so far are equivocal and cater to a wide and often ill-defined diversity of learner needs. There is a clear need for a richer means of establishing both networked and personal learning environments that offer appropriate levels of freedom, control and constraint when needed in both pedagogical and organizational terms. The crowd can be a source of wisdom but can equally be a source of stupidity with processes like preferential attachment that are as capable of leading to the Matthew Principle (where the rich get richer and the poor get poorer) and rampant bandwagon effects as to enabling effective, connected learning. We also note the criticism of connectivism as being merely an extension constructivist pedagogy and those who argue that it is not really a complete theory of learning nor of instruction (Wade, 2012). However, taken as a family of theories rather than one particular flavour, there are some general principles that help to distinguish this from previous pedagogical generations of online learning: distributed cognition; collective intelligence distributed across a network; a multiplicity of tools, methods and goals; an emphasis on an individual and the individual's connections; an assumption of ubiquitous social connection; a decentralization of teaching roles; a focus on creation in a social context as an active constituent of learning. Instructional designs for connectivist learning, are as yet only loosely described and still evolving. Two essential characteristics though define connectivist pedagogies. The first is the need to gain high levels of skill using personal learning networks that provide ubiquitous and on demand access to resources, individuals and groups of potential information and knowledge servers. The second is the focus on creation, as opposed to consumption, of information and knowledge resources. As we shall see, the revised listings of Bloom's (1956) cognitive taxonomy place creation at

the highest level of cognitive processing assuming understanding, application, and evaluation as component pieces of the creative process. There are also strong parallels with constructionist approaches that emphasize creation as playing a central role in the construction of knowledge (Papert & Harel, 1991).

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CHAPTER 5

OPEN WEB 2.0 MANAGEMENT TOOLS

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Introduction

First defined by O'Reilly, the Web 2.0 concept is the second generation web platform in which the user is active with features such as providing information, generating information, sharing and sharing information from users. The concept and tools of Web 2.0 contain a large literature.

When the usage areas of Web 2.0 tools in university education are examined, it is seen that they are used in three different ways in the literature; support for administrative affairs, face-to-face training and support for e-learning. Within the scope of administrative affairs, it has been seen that web 2.0 technologies are used in proper operation of units such as university student affairs or library (David, 2010; Wankel & Wankel, 2011).

In order to use Web 2.0 tools in learning processes, both the students and the instructors who educate them should have knowledge and awareness on this subject. In this section, open web 2.0 tools and features that affect administrative processes are discussed and 55 free web 2.0 tools are categorized.

Features of Web 2.0 Tools

When Web 2.0 was first used, social networking sites; blogs and wikis. Unlike Web 1.0 technology, web 2.0 technology; These are the internet environments where the user is active with features such as providing information, generating information, sharing, sharing, and discussing, etc., from users only receiving information. In simple terms, Wikipedia, Youtube, Flickr, Sour Dictionary, Twitter, Instagram, Facebook, etc .. sites such as other users can see the activities, can follow, communicate, make common activities are the websites or tools used (Uzunboylu, Bicen & Çavuş, 2011). Table 1 shows the changes in the characteristics of Web 2.0 tools from the past (O'Reilly, 2005; Boulos & Wheelert, 2007; Musser, O'Reilly & others, 2007; Coleman & Levine, 2008).

Table 1. Features of Web 1.0 and 2.0 tools

Web 1.0	Web 2.0
There is static content. The focus is on the content.	It has dynamic content. The focus is on interaction.
The message is forwarded via e-mail. There is asynchronous interaction.	Information is linked via RSS. There is simultaneous and asynchronous interaction.
Content is produced and edited in accordance with the principles.	The associated content from logs, wikis, and other participating sites is used.
Information technology is imposed in the control of technology.	Individual use of new technologies and content creation.
Information is sought and browsed.	Information is published and configured.
There is a transactional interaction where the flow is followed.	There are interactions with mutual relations.
There is organizational taxonomy.	Folksonomy is included.
There is only one application for everyone.	Individual and chat room applications are available.

The Importance of Web 2.0 Tools in Education

Although the upper limit has not been determined, the generation born after 2000 is called the Z generation. Generation Z is a generation that adapts very easily to technology, has high self-confidence, has high analytical thinking skills, knows what they want, and closes this gap thanks to their ability to carry out many tasks at the same time, although their attention is limited, and gives importance to creativity and innovation. Because of their distinctive characteristics, generation Z does not exactly give the student the desired effect. Therefore, new generation students and new generation methods and methods should be used. Web 2.0 technology helps us with this and helps us to create a more suitable education environment for the next generation of young people.

The development of Web 2.0 tools can be thought of as a technological innovation that supports the change in the education system and can be used easily. Students who use Web 2.0 tools are not only individuals who consume the information given in the classroom; they become active student groups that produce, manipulate, question the source and produce new information.

Byrne (2009) listed the many benefits of web 2.0 technologies in the educational dimension as efficiency, motivation, learning and learning to learn and listed these benefits. The first 3 titles are given here.

Contribution of Web 2.0 Tools to Education Environment

- It creates a more active and participatory classroom environment.
- Students perform positive attitudes towards each other in the educational environment.
- In the educational environment, group work contributes to the development of skills such as effective learning, high-level thinking, constructivist learning, individual learning, taking responsibility, etc.

Contributions of Web 2.0 Tools to Students

- Students who use Web 2.0 tools help them become technology literate, active and participatory individuals in their learning and future lives.
- The students who use Web 2.0 tools have the desire to develop the course and have the happiness of developing something because they have achieved the results of their efforts for being product oriented.
- Students who use Web 2.0 tools can work with the best learning method appropriate to them because they have the possibility to work flexibly on the product. Realize the most effective learning with individual learning method.
- Students who use Web 2.0 tools are only active students who produce information, change information, and question the source from the position of individuals who consume the given information.

Contributions of Web 2.0 Tools to Teachers

- The teacher, who uses Web 2.0 tools, brings vitality to the classroom with the different activities, programs and products that he brings to the classroom.
- The use of Web 2.0 tools increases the variety of teachers' assessment. Use product-oriented assessment methods as an alternative to standard assessment.

- The teacher uses Web 2.0 tools to use more up-to-date and functional content in the lessons.
- Thanks to the variety of Web 2.0 tools, the teacher is free in time and space. In this case, it allows the teacher to give more information in a shorter time and to minimize the loss of time during the evaluation phase and to use this time in different activities.

Theoretical Background of Web 2.0 Tools

Constructivist education philosophy, especially social constructivism learning theories, has a great role in creating Web 2.0 tools. (Conole & Alevizou, 2010; Lu, Lai, & Law, 2010). Social constructivism, one of the important theories of constructivism, appears to emerge from Vygotsky's views, emphasizing the social context, culture and cooperative dimension of learning (Terwell, 1999). In social constructivism, unlike cognitive constructivism, it is suggested that the various characteristics of the society in which the individual lives affect the process rather than the fact that knowledge is something that the individual has (Akınoğlu, 2011). In other words, while cognitive constructivism presupposes that information acquisition is an individual process that occurs in the mind of the individual as a result of interaction with the environment, social constructivism emphasizes the role of society and culture in learning. (Köseoğlu & Tümay, 2013).

Students are encouraged to be active participants in the classroom and contribute to the content, and web 2.0 tools allow users to create, manipulate, control and socialize content (Horzum, 2007). In this context, the development of web 2.0 tools can be considered as a technological innovation that supports the change in the education system and can be used easily. Students who use Web 2.0 tools are not only individuals who consume the information given in the classroom; they become active student groups that produce, manipulate, question the source and produce new information. Baş and Beyhan (2017) found that social constructivist learning environment design practices significantly increased their academic achievement and attitudes towards English lessons.

In this context, Web 2.0 tools support learner autonomy and independent study theory. Wedemeyer has developed a system that allows learners to work independently and requires the use of technology for this purpose. This system should be able to perform the following 10 functions. (Simonson, Schlosser & Hanson, 1999). These:

- To provide service independent of time and place,
- To give a large part of the learning responsibility to the learner,
- To ensure that faculty members make efforts to perform the function of facilitating learning,
- To provide students with the opportunity to learn in different ways,
- Appropriate use of all proven teaching environments and methods,
- Using blended teaching environments and methods to enable students to learn in the way they know best,
- Continuously redesign and develop courses,
- Considering individual differences and offering options according to these differences,
- Evaluating student achievement without any obstacles such as space, learning speed, methods or ranking,
- To allow students to learn at their own pace.

Wedemeyer's theory of independent study emphasizes that success in open and distance learning depends largely on the communication between the teacher and the learner (Aydın, 2011). In order to meet the needs of the individual in the learning process, the desire to have access to information at the desired time and place has directed individuals to digital learning environments and for this purpose, Web 2.0 tools, especially social networks have been transformed into distance and lifelong learning environments.

Another theory of influence, the theory of connectivity, suggests that knowledge is not in the individual itself, but in the external world. Connectivity defines learning as developing networks by creating links. Connectivity is the use of networks with links and extensions of bonds (Siemens, 2005a). In the theory of connectivity, education is not phased in a chain as in the old classical system. In connectivity, the bonds and nodes (intersections) of these bonds form the network. The classical system thinks like a directory, and Connectivity thinks like a network. The principles of connectivity:

- Learning and knowledge lies in the diversity of ideas.
- Learning is the process of connecting specific nodes or sources of information.
- Learning can be found in non-human practices.
- Learning capacity is more important than what is currently known.

- Ties must be maintained and nurtured to ensure the continuity of learning.
- To see the links between fields, ideas and concepts is the basic skill.
- The purpose of all linking learning activities is up-to-date, accurate information (Siemens, 2005b).

It is the most important skill to connect to information when information is needed, but what information is, how it is not known. As knowledge continues to grow and evolve, that is, as the content of information changes constantly, access to information will be more important for an individual than is currently known.

Connectivity expresses that learning is no longer an internal, individual activity and emerges as a learning model in today's society by explaining the tectonic movements in the post-millennium world. Connectivity enables learners to gain an understanding of the skills and competences needed to increase their knowledge in the digital age (Siemens, 2005a; Siemens, 2005b).

Basic Classification of Web 2.0 Tools

Web 2.0 tools are gathered under different categories by different institutions (Munoz & Towner, 2009; Altıok, Yükseltürk & Üçgül, 2017). Table 2 provides the basic web 2.0 tools.

Table 2. Basic Classification of Web 2.0 Tools

Animation Tools	Coding Tools	Classroom Management Tools
Survey Tools	Logo Design Tools	Presentation Tools
Storage and Filing Tools	Music & Audio Tools	Team and Group Tools
Digital Board Tools	Game Development Tools	Calendar, Schedule Applications
Electronic Book Tools	Social Network Sites	Text and Authoring Tools
Photo and Picture Tools	Poster and Banner Tools	Video Conferencing ToolsTools
Map Tools	Virtual Reality Tools	Video Tools
Cartoon and Drawing Tools	Test and Exam Tools	Web Development Tools

The number of Web 2.0 tools and the variety of possibilities they offer are increasing. Therefore, vehicles with similar characteristics are classified under certain headings according to their characteristics and this classification is changing and expanding day by day.

Open, free administrative web 2.0 tools are classified according to their usage areas. Although these web 2.0 tools are limited to some extent, they are free of charge to teachers and students and are provided in figure 1.

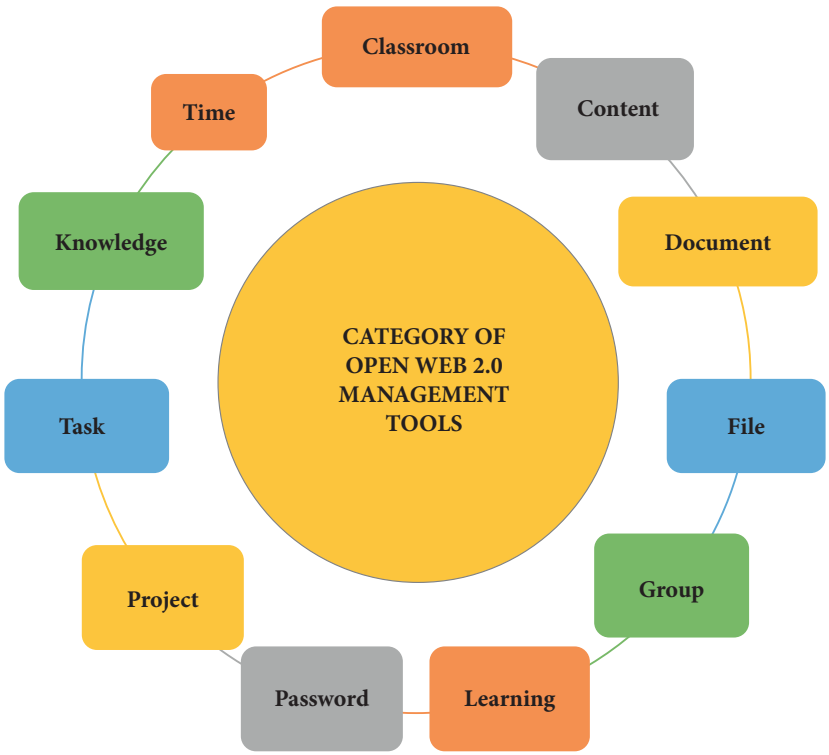

Figure 1. Classification of administrative open web 2.0 tools

Each category title has been given at least 5 examples of web 2.0 tools. The student, who constantly uses different web 2.0 tools, remains more active and fit. It encourages students to become technology literate, active and participatory individuals in their future lives. This prepares them for professional life (Punie & Cabrera, 2006). In addition, students' motivation to participate in the activities increases with the products they develop with the help of these different web 2.0 tools. (Conole & Alevizou, 2010; Lu, Lai, & Law, 2010).

Classroom Management Tools

To increase the productivity of teachers and students in the educational environment, to strengthen student-teacher and student-student interaction outside the classroom, to provide students with a collaborative learning environment for group work, to encourage the enrichment and sharing of course resources, to facilitate the follow-up of student tasks (homework submission, project studies etc.). and class management web 2.0 tools to provide quick feedback to students to briefly overcome the physical barriers of the classroom atmosphere. These tools help students to work comfortably on the product during flexible working hours and outside the classroom, and support students with different learning styles (Prashnig, 2006).

In addition, a teacher who uses web 2.0 tools brings vitality and movement to the class through the different activities, programs and products that he brings to his class. (Çınar, Doğan & Seferoğlu, 2015). Students are helped to keep track of their success, homework performance, and their degree of activity in the classroom with the fun virtual characters they create. Teachers, students and their families communicate with each other by sharing photos, videos and messages (Bozkurtlar & Samur, 2017).

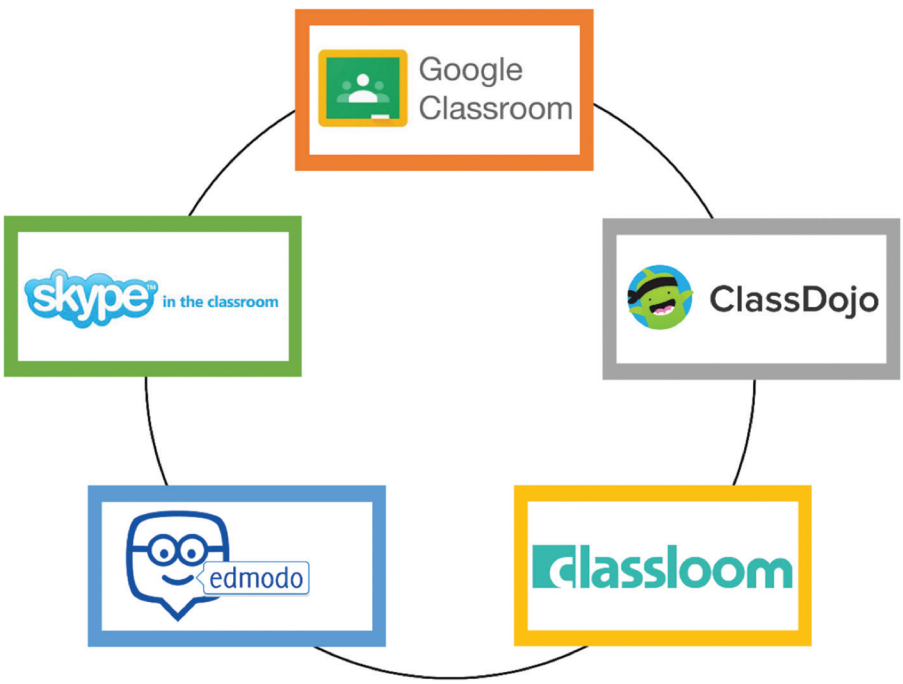

Figure 2. Classroom Management Tools

Content Management System Tools (CMS)

Content management tools are defined as the means of collecting, accessing and storing data such as synchronous or asynchronous, animation, simulation, sound, text, graphics, video in digital form in fully processed or semi-processed form (Robertson, 2003). Content management systems include the functions of collecting, managing and publishing information as well as providing a systematic and orderly storage of content on prepared platforms.

With Content Management Tools, you can create and manage your content with drag-and-drop without using code. Students participate in the educational environment with more sensory organs. This enables them to acquire more memorable information and develop cognitively (Prensky, 2009).

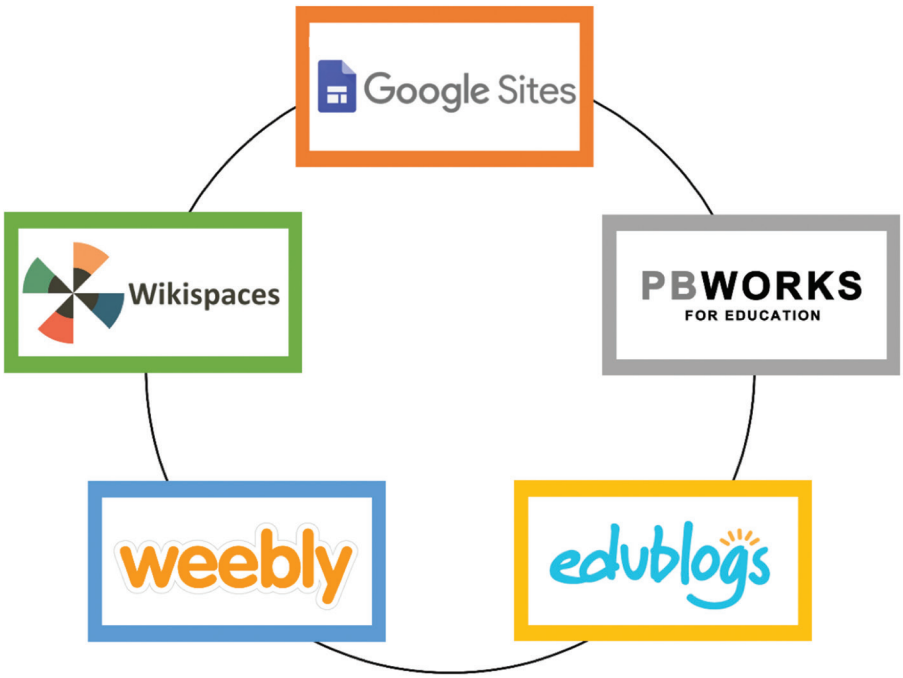

Figure 3. Content Management System Tools (CMS)

Document Management Tools

Document management systems are pools of important documents related to organizational routines. Clear information is stored in these pools and the ability to do business is increased by reaching them when requested. Document management systems are one of the most important document management tools because of the function of converting open information to open information.

Smart editing and formatting tools to help you easily format text and paragraphs, and bring your documents to life, choose from hundreds of fonts, add links, images and drawings, browser-based, mobile application-supported tools that offer absolutely free use.

It serves as a collaborative tool for organizing documents in real time. Documents can be shared, opened, edited by multiple users at the same time, and users can see changes from other collaborators character by character.

Gives students the right to go beyond textbooks, create content and edit content; this allows students to develop their self-confidence (Conole & Alevizou, 2010).

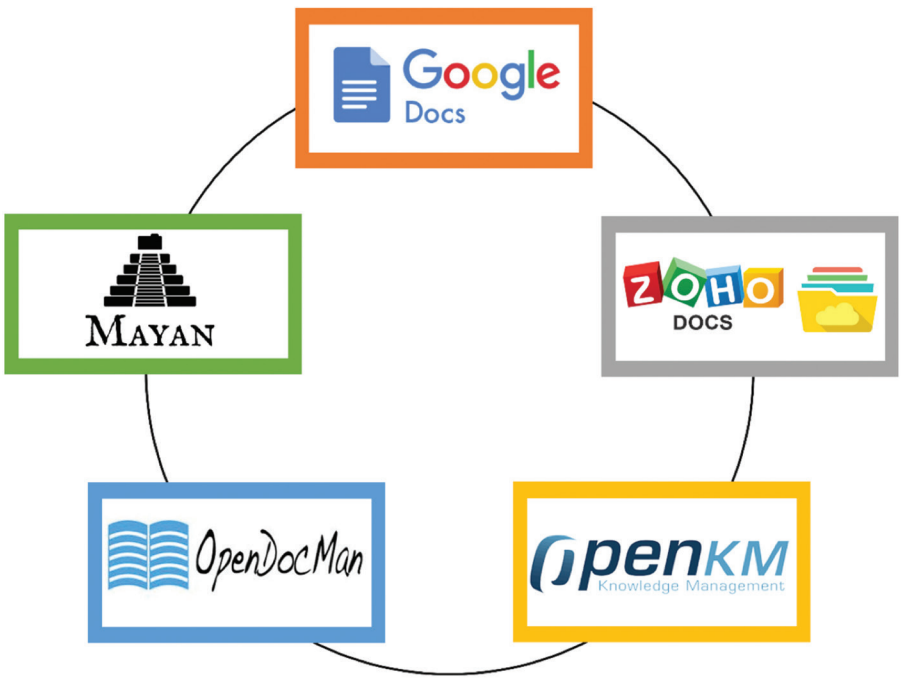

Figure 4. Document Management Tools

File Management Tools

File management tools are the tools used to archive your data (files) in a digital environment. It offers its users the option of upgrading to the desired quota along with the limited quota it offers for free.

Not only can it be used in teacher-student file sharing in educational environments, it also contributes to the rapid and safe realization of administrative functions.

Cloud-based file management tools are also very effective for collaborative learning style, which is often used in constructivist learning theory, as it allows students to collaborate independently of time and space.

Researches on Web 2.0 tools show that these tools can be used to support constructivist learning in and outside the classroom environment. It is clear that the way to do this will be realized by the effective use of these tools by the teachers and the guidance of the students (Horzum, 2010).

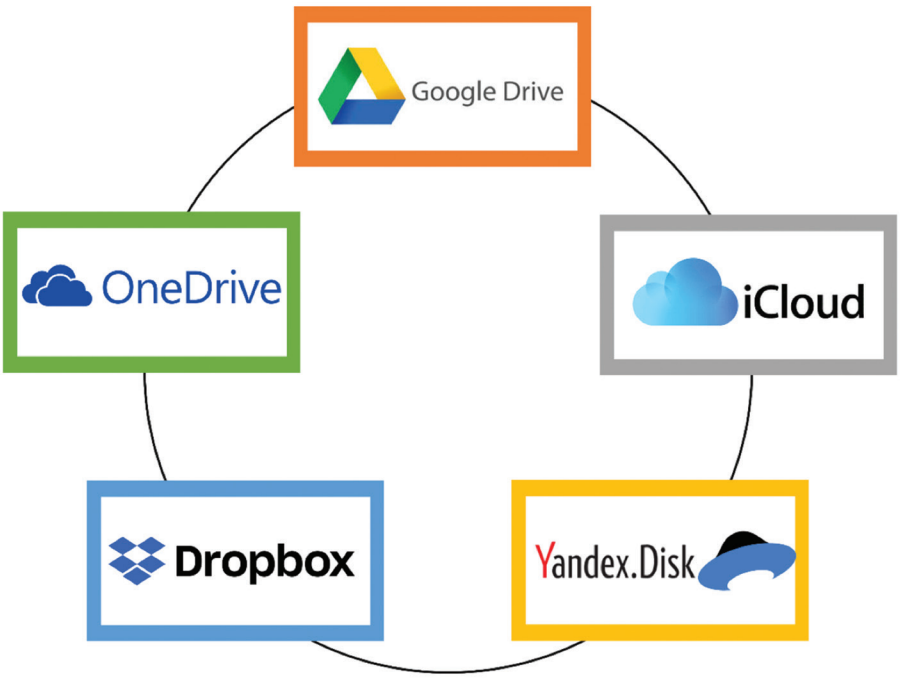

Figure 5. File Management Tools

Group Management Tools

They are real-time communication tools designed for teams. The cloud-based solution combines group communication in a centralized environment and changes long e-mail topics and status update meetings. Conversations are automatically indexed and archived; this allows users to migrate files, including PDFs and Google documents, regardless of how long ago they were shared and discussed. It searches files and allows users to share documents with almost anyone.

Students are encouraged to work in groups, often using web 2.0 tools; this allows them to socialize and make the most of each other's experience and knowledge (Conole & Alevizou, 2010; Franklin & Van Har Melen, 2007; Lu, Lai, & Law, 2010; O'Reilly, 2007).

Figure 6. Group Management Tools

Learning Management System Tools (LMS)

Learning Management System (LMS) is a system where organizations organize, monitor and manage employee training processes and operations. These systems are now installed on demand when the Host and Domain are purchased. Therefore, they are now in the category of open administrative web tools.

Learning management systems are often used for orientation processes, professional development, personal and managerial development and adaptation to changes that employees go through when joining the team. Thanks to these systems, which arise due to the difficulties of institutions in managing their training processes, all training processes can be easily managed at a single point. They monitor and make use of all training activities in a holistic and visual flow, including classroom training, online training, virtual classroom, tasks, assignments, etc.

Öğrenciler her an, her yerden, her konuda bilgiye ve dijital içeriğe erişmektedirler. Çalışanlar aynı zamanda, ödevler, anketler, sınavlar ve yorumlar ile hem gelişim durumlarını görmekte, hem de öğrenme sürecine aktif olarak katılmaktadırlar. Üstelik öğrenmeyi daha fazla motive eden oyunlaştırma araçları ile daha zengin bir öğrenme deneyimi yaşamaktadırlar.

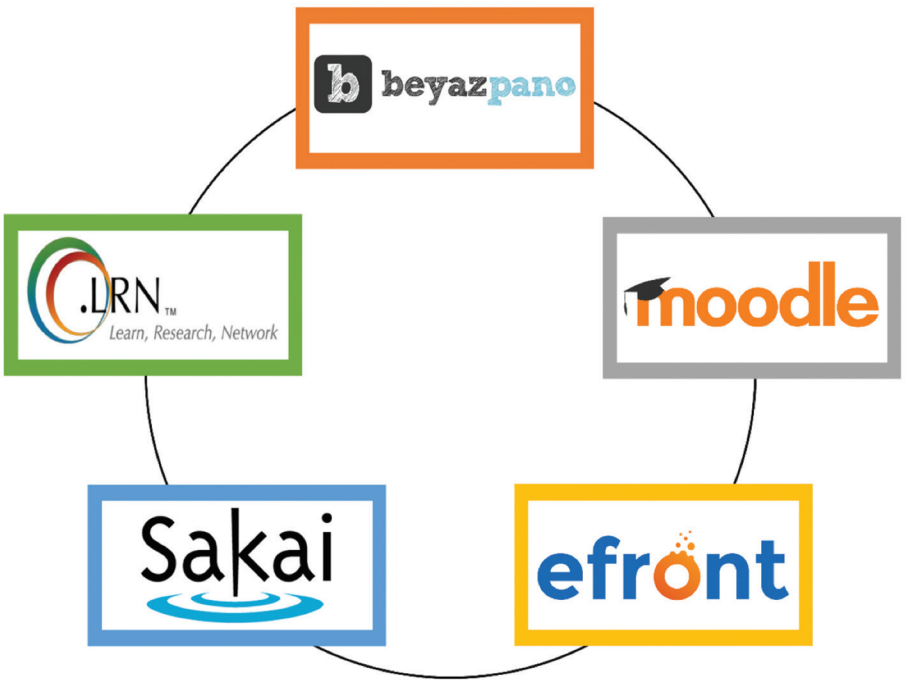

Figure 7. Learning Management System Tools (LMS)

Password Management Tools

It is a web.2.0 tool which is developed to put an end to the password confusion experienced by Internet users and offers the possibility to log in to all accounts from a single account. You can log in to all your website accounts by simply installing applications on your computer and creating a user account. user name, e-mail, password. It is especially useful for people who have many users or do not want to store their passwords in a text document. You will not have to remember all your passwords when you use secure applications or write them one by one manually. It also fills in the form fields for you without waiting for you to issue a command on the passwords you have defined for a website.

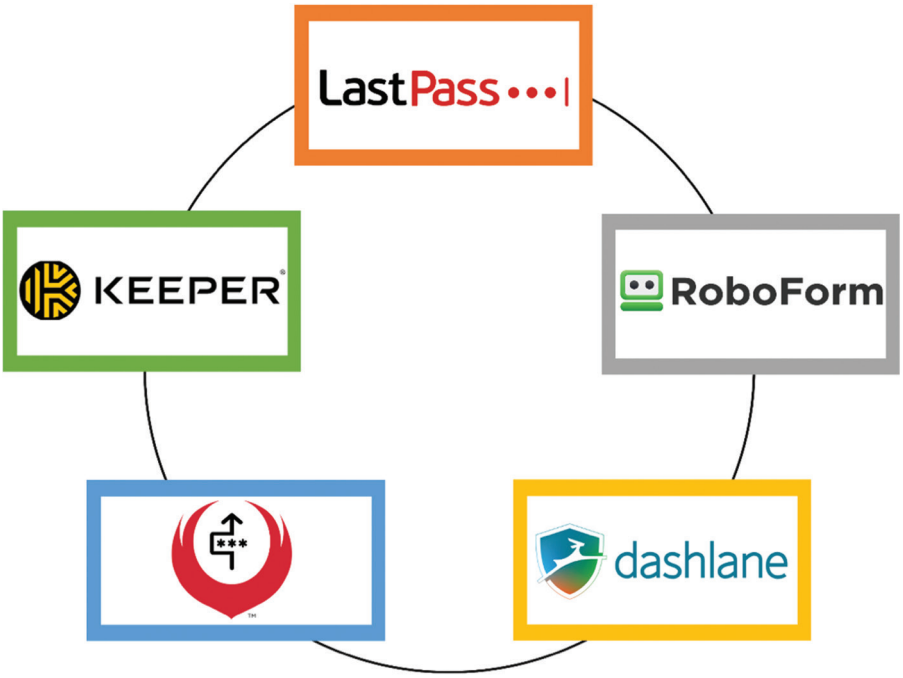

Figure 8. Password Management Tools

Project Management Tools

These tools are very effective in ensuring the division of labor on a regular basis and monitoring the work performed. Different tools can be assigned to different people on these tools, which makes it easier for project managers, since it eliminates the need to write to each individual by mail or verbally.

Since they are online tools, this project can be accessed from anywhere with an internet connection, eliminating the need to carry a business computer. In addition, since some of these tools also have a mobile application, projects can also be tracked via smart devices, and updates to the project will be notified to the user's smart device.

The gaps in Web 1.0's one-way communication were closed with the advent of Web 2.0, and the era of two-way communication began.

In addition to sharing information to all individuals in the community, Web 2.0 tools provide an area of freedom in accordance with the ethical rules for expressing their thoughts, philosophies, likes or dislikes, and making comments on topics of interest.

Figure 9. Project Management Tools

Task Management Tools

They are the tools for sharing information and tasks under a single platform between your team, employees, students and management staff. Keep track of tasks, automatically remind you to keep you informed of the last day of the task. Understandably dynamic small boards and windowed tasks are offered.

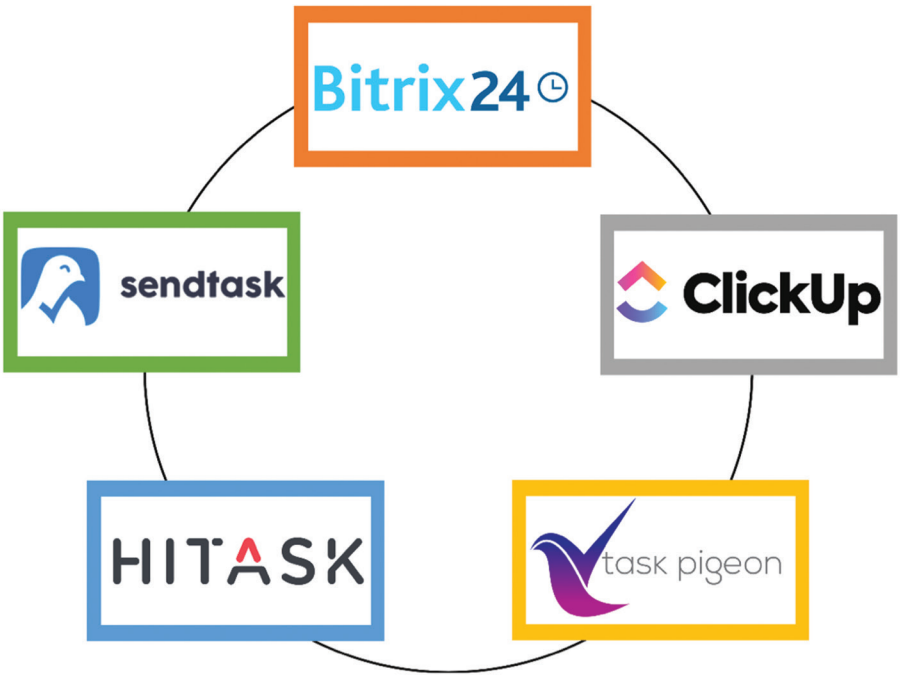

Figure 10. Task Management Tools

Time Management Tools

They are web 2.0 tools where tasks, assignments, projects and tasks are given in the form of a digital and dynamic timeline.

Time management; It is a method to consciously control the time spent on certain activities in order to increase productivity and productivity. Time management can be supported by a variety of skills, tools, and techniques used to finish specific tasks, projects. These skills, tools and techniques; planning, distribution, goal setting, authorization, time analysis, monitoring, arrangement, timing and prioritization, and the like. In the past, time management was used only for business and work activities, but later for personal activities. A time management system; is a designed combination of processes, tools, techniques and methods. Time management is generally a requirement in project development, time management determines the time and scale of completion of the project.

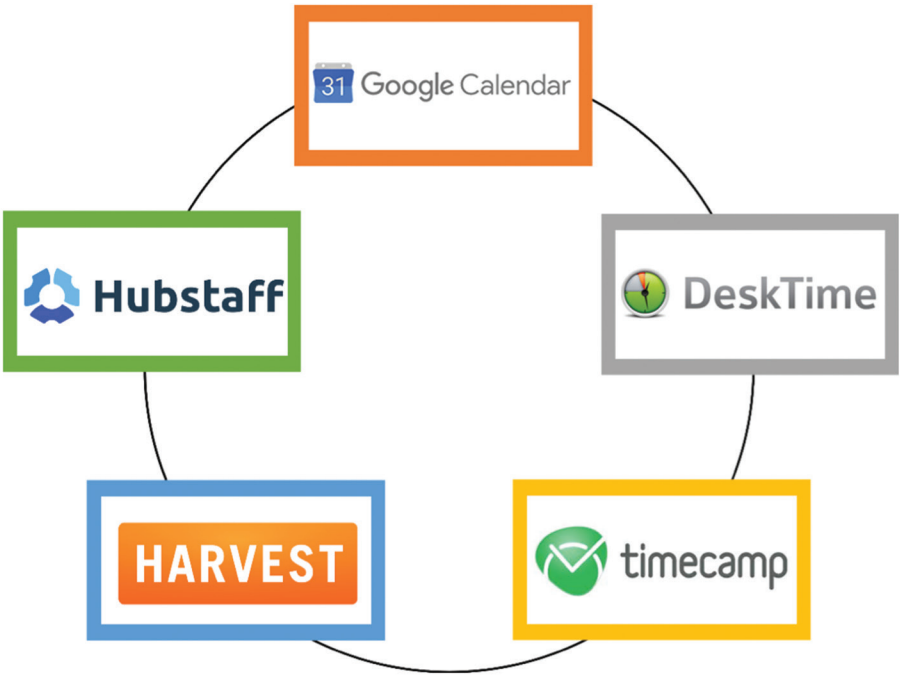

Figure 11. Time Management Tools

Knowledge Management Tools

Knowledge management can be achieved through the operation of information systems. Some software and hardware technologies are needed for the functioning of knowledge systems. In order to achieve this, some network systems and communication technologies such as computers, internet, intranet and extranet are needed.

Thanks to these opportunities provided by Web 2.0 technologies, it has transformed the information feature on the internet from static to dynamic (Soomro, Zai, & Jafri, 2015). Because the majority of users in web 1.0 technologies are content-consuming or passively readers; Thanks to web 2.0 technologies, it has become a contributor to content production (Cormode & Krishnamurthy, 2008). Now users have an active role in the creation of information.

Students can go to the source of the information they have learned with the logic of web links (hyperlink) and they can easily research in depth the concepts they want (O'Reilly, 2007). Reach information in the most current and functional state.

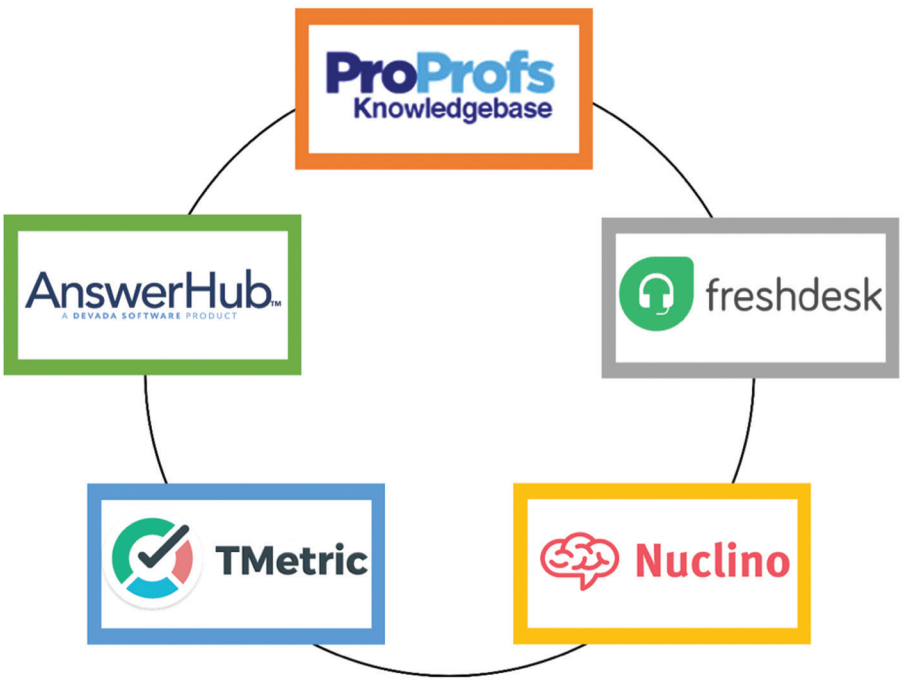

Figure 12. Knowledge Management Tools

End Of Section

Abstract

Interaction between human and web applications, user-to-user communication, collaborative work, and access to information is becoming more and more straightforward with the increasing use of web 2.0 tools.

Administrative 2.0 Web tools; in organizing the effectiveness of internal communication, in the efficient circulation of information between different departments and units, in recording the unstructured information produced within the institution, in the production, sharing and organization of information in the electronic environment, in the joint work of the employees, in the participation of virtual conferences and in scientific content. information sharing, internal communication between top managers and employees, providing training applications to employees, the creation of promotional / usage information about products and services, social activities, in-class student management, remote video-conference interview management.

With this perspective, in this section of the book, administrative, open web 2.0 tools are examined and 55 different web 2.0 tools are classified with a different perspective for students, teachers, academicians and administrators.

Discussion And Results

It is important to address a number of conclusions in this section, where open web 2.0 tools and features that affect administrative processes are addressed. Management requires a group effort; every activity carried out in cooperation and coordination brings along the administrative structure and organization. Common features of different definitions in management concept; management is seen as the process of achieving the targeted results by using human resources and materials efficiently.

With the developments in science and technology, it is also called the 21st century information age. The scope of the information, the way of access to information, the speed of the changes in the management of the students, employees and units and the effective provision of cooperation, new channels emerge in accessing the information. Technology has become a necessity, a necessity and a principle that must be continuously applied for the organization rather than being an alternative situation that can be used for the existence of advanced institutions, achieving its goals and achieving development.

Second generation internet technologies (web 2.0), such as blogs, podcasts, and social networks, which educators, researchers and students can easily and often free of charge, have begun to offer new opportunities in education. However, information and communication technologies can be integrated effectively in educational institutions only as long as managers actively support and learn and support their staff.

The fact that web 2.0 based environments make collaborative work, access to information, social interaction and feedback very easy has led to their use in the field of education. It can be said that Web 2.0 technologies commonly used in educational studies are blogs, wikis, podcasts, video sharing sites and social networks. The applications brought by Web 2.0 can be used to realize many educational purposes (Elmas & Geban, 2012).

Palaigeorgiou and Grammatikopoulou (2016) investigated teachers' views on the benefits and challenges of the use of web 2.0 tools in educational use. 26 teachers participated in the study and the data were collected by interview method. According to the results of the study, the teachers stated that the learning process was student-centered by means of web 2.0 tools, they learned how to collaborate and produce digital content, and they were beneficial in terms of increasing the motivation of the students. In addition, teachers stated that factors such as negative attitudes of other teachers and families, impact of management, incompatibility of curriculum and web 2.0 tools, technical problems, inadequate in-service trainings affect the educational use of web 2.0 tools.

With the rapid development of ICTs, opportunities for teaching-learning processes are increasing. Web 2.0 tools are at the top of these possibilities. When the literature is examined, it is seen that web 2.0 tools contribute to the teaching and learning processes in a way to improve and improve (McLoughlin and Lee, 2010; Venkatesh, Croteau and Rabah, 2014).

In this section, 55 different open administrative web 2.0 tools have been classified and their effects and contributions on educational environment and elements have been examined.

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Web Links of Administrative Open Web 2.0 Tools

Classroom Management Tools

www.classroom.google.com

www.classdojo.com

www.new.edmodo.com

www.education.microsoft.com/skype-in-the-classroom

www.crunchbase.com/organization/classloom-com

Content Management System Tools (CMS)
www.sites.google.com
www.pbworks.com
www.wikispaces.com
www.edublogs.org
www.weebly.com
Document Management Tools
www.docs.google.com
www.zoho.com
www.opendocman.com
www.mayan-edms.com
www.openkm.com
File Management Tools
www.google.com/drive
www.onedrive.live.com
www.disk.yandex.com
www.icloud.com
www.dropbox.com
Group Management Tools
www.eloops.com
www.slack.com
www.visme.co
www.whereby.com
www.mindmeister.com
Learning Management System Tools (LMS)
www.moodle.org
www.beyazpano.com
www..dotlrn.org
www.efront.com
www.sakailms.org
Password Management Tools
www.lastpass.com
www.dashlane
www.keepersecurity.com
www.roboform.com
www.iolo.com/products /byepass
Project Management Tools
www.asana.com
www.trello.com
www.wrike.com
www.digite.com/swiftkanban
www.basecamp.com

Task Management Tools
www.asana.com
www.clickup.com
www.sendtask.io
www.taskpigeon.co
www.hitask.com
Time Management Tools
www.calendar.google.com
www.hubstaff.com
www.timecamp.com
www.getharvest.com
www.desktime.com
Knowledge Management Tools
www.devada.com/answerhub
www.nuclino.com
www.proprofs.com
www.freshdesk.com
www.proprofs.com/ knowledgebase

CHAPTER 6

INSTRUCTIONAL DESIGN MODELS OF OPEN PEDAGOGY

Assist.Prof. Dr. Didem İŞLEK
Near East University
Assist. Prof. Dr. İpek DANJU
Near East University

A General Overview of Open Education

As seen in many fields, globalization affects not only education systems but also causes the removal of borders and more frequent use of information technology in education. This outcome emphasizes the importance of open education which is independent of time and place and provides a more economical and an influential educational environment (Toker Gökçe, 2008). Open pedagogy, also known as open education, is to enhance efficient education to reach maximum numbers of learners who inhabit all around the world.

At this point when the national and international literature is examined, it is found out that the concept of ''open education '' is defined in various ways by educators:

Karakaş (2000) has defined open education as an educational model and stated that this education can be carried out by teachers and trainers by using various means of communication in different locations. Killan (2004) defines open education as an educational approach in which peer learning and group work techniques together with time management are adjusted and the trainer and the trainee can communicate simultaneously without limited locations and with flexibly planed contents. Uşun (2006) defines open education as a systematic application of education in which trainer and trainee are in different locations during teaching-learning process and where they use visual- audial materials and computer -enhanced technology. Gökdaş and Kayri (2005) explained it as a systematic education in which the learner, simultaneously or at the same time can easily have online access to the course content planned by the teacher. According to Elmas, Doğan, Biroğul

and Koç (2008) it is a type of education where teachers and students are at different geographical locations and where transferring the course content and interaction take place by using technology. Moore and Kearsley defined it as administrative programmed, planned institutional regulations where the teacher and the learner are at different locations during the teaching process. They use planned course contents and technology based teaching methods. Simoson, Smaldino, Albright and Zvacek (2012) explained open education as an educational process which requires special course design and goal according to the content of the course and which does not have location limitations.

As can be understood with the definitions above, open education is an educational process involving;

- No location limitations
- Teacher and learner interaction
- Technology based teaching materials and methods,
- Different content design,
- Flexibility principle to design the content,
- Course content transfer, designed and applied visual and audial materials,
- A planned and programmed teaching – learning process.

With the definitions mentioned above, it can be said that open education is an educational process which enables utilization of technological tools , where technological tools are improved and applied, which has no place limitations, which enables effective time management, which has a flexible course content choice and where teaching in a groups is possible.

The History of Open Education

The development of open education will be investigated in two sections as "Development in Turkey" and "Development in the World".

2.1. The Development of Open Education in The World

Contemporarily, the beginning of open education dated back to 18th century. Within this concept, Siemens, Gasevic & Dawson (2015) emphasized in their study that in 1728 a teacher named Bostonian Caleb Phillips sent a syllabus to students living in different places every week and emphised they could follow the

course without a decrease in the lesson's performance. Furthermore, when the literature is reviewed, in 1833 in Sweden there was an advertisement in a newspaper which advertised that written expression lesson (distance learning) would be given by letter (Verduin and Clark, 1991). Also, the first application of distance learning started with Isaac Pitman's steno teaching (a writing method, made up of short plain symbols which enables writing the speech fast and much the same) by letter in England in 1840. Following this, in 1883 in Ithac, New York, Teaching by Letter University was established (Hall, 2006). In 1890s The Queensland University in Australia developed and applied a distance education program which is open off-campus (NEA, 2000). Along with the investigations, it is said that open education was mentioned as a concept in the Wisconsin University catalogue for the first time in 1892 (Simonson, Smaldino, Albright & Zvacek, 2012). In 1920s an open education program, similar to the one developed at Queensland university of Austarlia, was run at Colombia University (NEA, 2000). In addition to these, the beginning dates of open education application of some countries in the world, schools, high schools, university and name of the institutions are given in figure 1.

In figure 1 it can be seen that the distance education studies in Sweden, the United States of America, Germany and England started in the second half of the 19th century and in Austria, Poland, New Zeland Spain and Turkey it dated back to 20th century.

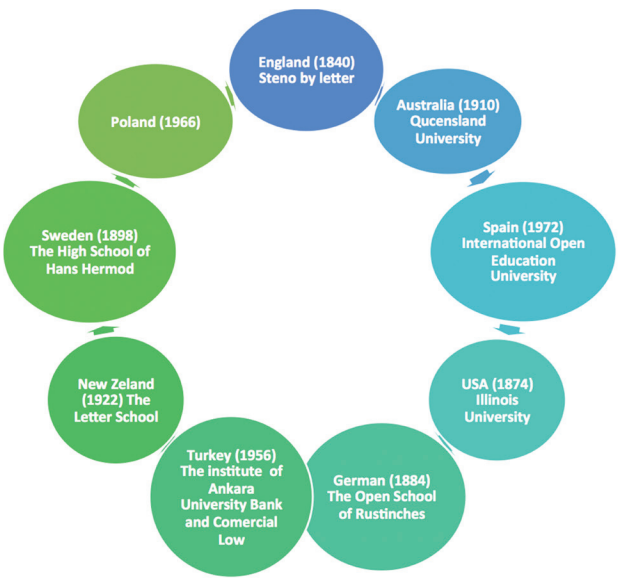

Figure 1. Starting dates of Open EducationApplication in some countries (Kaya, 2002)

When the literature is reviewed, it is seen that Williams and Pabrock (1999) studied the open education in three stages. Open education was provided with written materials, radio broadcastings and video tapes during 1860 – 1960, with dual audio and video broadcasting, and educational computer disks during 1960 – 1990, hybrid technology, virtual classes and internet technologies have been used since 1990s until recent times (William and Pabrock, 1999). Furthermore, it is found out in the literature that distance learning is examined in five stages as correspondence, radio and television broadcasting, open university, teleconference and internet/web (Moore and Kearsley, 2011). In correspondence, which is investigated in the first stage, teaching is provided by means of letters and using texts. In the second stage education is aurally and visually provided by radio and television. Formal education started and open universities established at the third stage. At the fourth stage effective, spontaneous lessons were started through voiced video conference with the help of telephone, satellite and computer networks. In the fifth stage, 'internet / web' stage, there are virtual classes based on internet technology and at universities there are online learning centres. In addition to this information, according to Zawacki Richter and Naidu (2016) who have analyzed the last 35 years of open education, open education is divided in seven stages. These stages are; professionalization and intuitional integrations (1980 – 1984), instructional design and education technologies (1985 – 1989), quality standard for distance education (1990 – 1994), the early stages of online learning and student supports (1995 – 1999), the appearance of open universities (2000 – 2004), peer learning and online interactive environment (2005-2009) and interactive learning, ''MOOC (Massive Open Online Courses)" and ''OER (Open Educational Resources)'' (2010 – 2014). On the other hand Casey categorized the technology used in distance learning throughout the historic process as open education and the post, open education and radio, open education and TV, open education and satellite broadcast, open education and computer,open education and WWW (World Wide Web)

Karaağaçlı and Erden (2008) categorized the function of distance education between 1980s and 2000s as the followings:

Open education;

- was a strategy in 1980s
- was a quality increasing factor in 1990s
- was a means of communication – information based enterprise

All the mentioned information revealed that open educational practices dated back to 18 th century and with web based and online learning it has become popu-

lar. Also, the first global practices of open education have continued initiatively at high schools and universities. It is acertained with the overview of the literature that open education has offered an effective and versatile communication both to the learner and to the educator since 2000s.

2.2. The Development of Open Education in Turkey

In Turkey, the history of open education dated back to the republic period. This period which is 1927 - 1956 is called conceptual period. The initiatives of distance education took place in 1927 within the scope of teaching "reading-writing". Until 1950 open education was only dealt with as a concept (Çallı, İşman and Torkul, 2002; Cabi & Ersoy, 2017). The first implementation of open education started with "correspondence course" in 1960 (Kaya, 2002). In 1974 teacher candidates were sent to "Pilot higher teacher training school" and they started to study at open higher education. These students then changed their schools and started to study at Non formal higher education Institution (YAYKUR) which gives distant education in primary school teaching, foreign languages, technical and social sciences. The milestone of open education was when the universities were authorized to educate via open education in 1981. In addition to this, in 1982 Anadolu Open Education Faculty started to apply open education (Demir, 2014). At the same time, the open education works accelerated with the start of Anadolu University, Western Europe in 1986 and Open Education programs and with the foundation of computer Aided Education BDE. In 1900s, open education started through e mailing at Fırat University (Bozkurt, 2017). Also, during the same years, Open Education High School was established, Computer based Education Asynchrony (IDEA) via internet was initiated at the METU and open Education for Higher Education Regulation was issued. Certificate programs initiated at Fırat University within the scope of open education in 1995. In the year 2000s open education programs started and the procedures and principles concerning open education were issued at higher education institutions (Gabi & Ersoy, 2017).

As it is understood, the development of open education in Turkey initiated with the conceptualization in 1927 and accelerated via correspondence teaching in 1960s. Moreover, it is observed that the applicability of open education was dealt with more comprehensively from 1999 to 2000s with the development of technology and with the increase in internet use.

Teaching Process in Open Education

The main goal of teaching at open education is to provide education to students living in different regions and who has different requirements through a democratic, interactive teaching-learning process (Aydın, 2011; Eby, 2013; Boz Yüksekdağ, 2016). As it can be observed in Figure 2, the teaching process in open education provides the learner with significant advantages.

- Open education process, in addition to formal education provides individuals with informal education which lasts lifelong and educate them according to their requirements
- Learner has easy access to information whenever he needs and at different environment
- Enables learner to share resources and have debates with both the teacher and the other learners within the scope of interactive communication skills
- Benefit from wide visual materials and lessons contents prepared by contemporary teaching design models

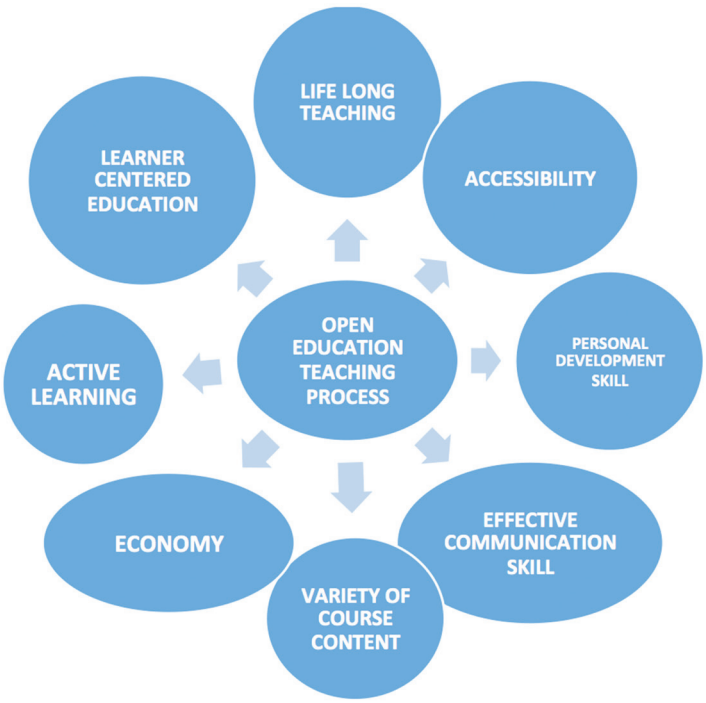

Figure 2. Advantages of teaching process in Open Education

- Cost and time saving for learners
- Learner take part in the teaching process actively
- Provides learners with student- centred learning process (Balıkçıoğlu, Çınar Öz & Işın, 2019; Çukadar & Çelik, 2003; Hakkari, İbili, Kantar, Boy, Bayram & Doğan, 2009; Toker Gökçe, 2008).

In addition to these it is pointed out in the literature that education at open education also gives equal opportunity for learners, provide education for large masses, enables to benefit from the experiences of teachers at different locations, provides education according to the learning speed and provides learners with opportunities to chose lesson contents according to their interests, age, and skills. (Balıkçıoğlu, Çınar Öz & Işın, 2019; Barış, 2015; Urdan & Weggen, 2000).

Furthermore, Baker, Evans, Greenberg and Dee (2014), Erdem (2002) and Straje (2014) emphasised in their researches that open education enables learners to access the information they require with respect to the increasing diversified education, and provide them with more quality open courses, and enables learners to inquire, to search, to think, to solve problems and to improve their learning skills.

Sherry (1996), Özer, Gür and Küçükcan (2016) and Aktürk (2017) stated the characteristic of open education as follows:

- Open education together with technological improvements and with the scope of progress and showing change accelerates the variety of learning
- The educator and the learners can carry out the education at different circumstances
- Open education offers variety of lesson contents. Provides the learners with education opportunity at different environment
- The teacher can give feedback to the learner in a very short time
- More economical when compared with the other education systems
- Learning takes place globally
- Provide the learners with pyshcomotor and cognitive skills at higher levels
- Provides individualized education opportunity
- A wide range of content and education enviroment can be designed for big groups

- Educational services like e-book, e-exercise, e-television, e-exam, similtaneous e-consultancy can be given on internet enviroment
- Learners can have access to the course contents anytime they want, can have mock exam and can follow the course via presentations or TV broadcats
- All the process about teaching – learning can be applied on internet

In addition to the mentioned characteristics of open education Urdan ve Weggen (2000) listed the concept of open education as; *computer based teaching, online teaching and electronic teaching* .Moreover Urdan ve Weggen (2000) defined computer based training as teaching with CD ROMs ;online teaching as information transfer via internet and electronic teaching as information transfer with the help of electronic media .

In addition to the characteristics of open education in the literature mentioned above, another important aspect of learning – teaching process is the communication models used in open education (Arat & Bakan, 2011).

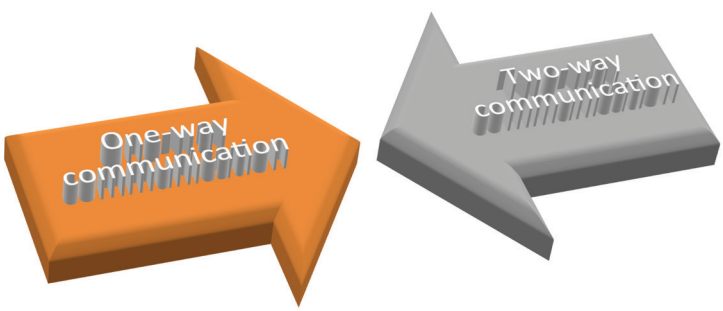

Figure 3. Communication Models in Open Education

As seen in the figure 3 the communication models used in open education are one way – communication and two- way communication. In the first model; there is a one-way communication between teacher-student, student-student groups during the teaching process. One – way communication limits teaching – learning time and doesn't allow groups to ask questions to each other. Education in one -way communication takes place via letters, e mails, radio, TV and computers. Students can follow the course by listening, watching and via their computers without having two – way communication. However; in the second model education takes place between teacher – student and student – student in two-way voiced or by video. By means of this model the groups can have correspondence, group discussions and do activities by using different teaching techniques (Keegan, 1999).

In adition to these information in the literature, it is stated that open education can be carried out in three different ways: synchronous, asynchronous and co-ed (Kılıç & Seyis, 2014). In case of synchronous where simultaneous education is carried out, time and place are set in advance, teacher and the students are on the computer at the same time and a virtual class is formed. In these virtual classes where effective teaching is provided students can ask questions to the teacher, discuss with the students or solve questions. On the other hand, in case of asynchronous education where education is time independent, asynchronous; students can attend the course from a different location anytime they want. In this model students can follow the open courses anytime they want and also can watch the repeat of the course at another time. Furthermore, students have the opportunity to ask questions about the topics and also the teacher has the opportunity to answer these questions anytime he/she wants. In co-ed, education takes place simultaneously or at different times and teachers and students have the opportunity to do effective educational activities (Balıkçıoğlu, Çınar Öz & Işın, 2019, Toker Gökçe, 2008).

With the given information above; it is understood that open education has offered great variety of opportunities to the learners. These are: offering a learner -centred environment, improving high level thinking skills, access to different, wide range of course content and providing multiple effective communication. Furthermore, it is seen that open education can be carried out with two different communication models such as one-way and two-way communication. Also it is emphasized that open education can take place synchronously, asynchronously and in co-ed form. This information points out the significance of open education.

4. The Process Of Content Improvement In Open Pedagogy

4.1. Content Development Stage

"Content Development Stage" plays an important role in the process of designing, improving and applying all the programs. In this context, it is thought that giving information about the general structure of the content improvement stage is more important than doing it before the process of content improvement in open pedagogy.

The information to be taught, concept, fact and the whole of revised topics make up the content of the programs. At this point it is essential to use specific criteria when determining the content of the program (Karacaoğlu, 2014). The criteria are stated below with their explanations.

- **Relevance:** The content must be adjusted in accordance with the goals
- **Self-reliance:** The content must involve detailed sufficient information
- **Meaningfulness:** The content must be fictionalized comprehensibly for the student
- **Level suitability:** The content must be prepared according to the readiness level of the students
- **Adaptability:** The content must be adaptable to real life and can be accessible
- **Effectiveness:** The content must be beneficial for the learners and for the society they live in.
- **Validity & Actuality:** The content must be related to the topic, must be current and scientific.
- **Economy:** Content should be systematic and planned finitely.
- **Consistency:** The content and the learning techniques must be consistent with each (Sönmez, 2008; Varış, 1997).

In addition to this, there are some factors to be considered when organazing and designing the content. The first one is that the content should be planned with the aim of getting the individual to the goal. Secondly the content should be organized to enable cognitive, affective and psychomotor goals. Thirdly, the content should be useful and meet the requirements. Finally, the content should be organized from concrete to abstract, from simple to complicated, from easy to difficult, from general to specific, from close to distant and should be prerequisite of each other (Demirel, 2007) .

The content should be planned in accordance with the goals specified according to society and the subject's requirements and when the content is organized, social and individual benefits and the association between the topics should also be considered. As it is understood content designing stage is significant for both face to face and open education programs.

4.2. Content Improvement in Open Pedagogy and Service Quality in Higher Education

The content designed by the teacher is offered to the learner by open education. It is time, place and location independent and thus reaches large masses. With the variety of contents offered by open education, teachers and learners save time, effective communication is provided and a productive education environ-

ment is created (Altıparmak, Kurt & Kapıdere, 2011; Çakır, Calp & Doğan, 2015; Morgan ve O'reily, 1999). At this point it is vital to follow the steps below when preparing the contents in open pedagogy:

- Firstly, it is necessary to prepare the storyboard expressing the position of the pictures, texts, animations and stimulations which are relevant to the lesson content on the screen (Çiçek ve Yazar, 2013)
- In the second stage while the storyboard is prepared, the content should be planned considering the learning levels and readiness of the learners (Virgil & Varvel, 2005)
- In the third stage it is important that the teacher should be informed of the content he /she improved and these contents should reach the learners
- In the fourth stage, the teacher plans the lesson content by using content development tools and instructional design models (Çakır, Calp & Doğan, 2015)

When the literature is examined, it is significant to chose suitable content tools and to benefit from instructional design models when improving lesson content in open pedagogy. Çiçek and Yazar (2013) insisted on making use of various tools when lesson contents are improved. They introduce video and presentations, interactive presentations, avatar presentations', Z-books, visual lessons and exams as means of content tools. They define these tools in their research as follows:

- **Z- Books:** These are the books enriched with sound, video and pictures. They are used in the preparation of the contents in open pedagogy
- **E-Exams:** With this tool the exams, questionnaires and multiple choice tests of the lessons given by open pedagogy can be prepared containing pictures and sound. The answers for the e-exams within the scope of open pedagogy can be given drag and drop as matching. If desired, the results can be evaluated immediately
- **Tools for preparing video presentations:** With these tools it is enabled to prepare video lectures by combining the image of any application on the computer with the image and sound coming from the web camera and microphone. Video, pictures and avatars can be used in the lesson content which is prepared with these tools. Lecturing can be done with the help of the video presentations, pictures and avatars. Teachers can test the students after completing lecturing by using ready tests tools. The tests can be multiple choice, true – false or matching.

In addition to these the learning analytics which are used to determine how often the students watch the courses and how much time they spend on the activities are also of vital importance. The learning analytics through LMS and CMS platforms enable to determine the time students spend on-line on reading contents (Ellias, 2011). This function of learning analytics assist increase the quality of the lesson contents offered by the open pedagogy (Patwa, Seetharaman, Sreekumar & Phani, 2018; Tsai & Gasevic, 2019). Besides these, another factor increasing the quality of the lesson contents of open pedagogy during the teaching – learning process is instructional design models (Karsley, 2000; Simonson, Smaldino, Albright & Zvacek, 2012). Instuctional design models guide the learner to orginize the teaching- learning process. Instructional design process involves determining the current situation and the requirements of the learner and defining the aims and the goals of the education (Reigeluth, 1999). It is believed that planning the lesson contents based on instructional design models in open education platforms will increase the service in higher education. In the researches carried by Peltier, Scibrowsky and Drago (2007) Reister, LaPointe and Korcuska (2007), Al-Otaibi, Yusof, Ismail (2016), Pham, Limbu, Bui Nguyen and Pham (2019) it is stated that in obtaining service quality in higher education there are basic 6 factors: communication between students, communication between student- instructor, course content, teacher's pedagogical content knowledge and subject matter knowledge. Of these criteria planning quality course content is emphasised as the most important factor.

With the information above It is obvious that planning the course content of open education learning analytics and instructional design models play vital roles. It is really important to plan these contents especially by using instructional design models. Thus, the following part involves the characteristics and the importance of the instructional design models which can be used in open pedagogy.

Instructional Design Models used in Open Pedagogy

The characteristics of the instructional design models which are very important for the planning of the course contents in open pedagogy are as follows:

- The course contents planned with The Instructional Design Models are learner centred. Thus, assit the students to learn themselves.
- Course goals are the focal points of instructional design models and the contents are designed according to them.
- Instructional Design Models assit students to adjust complex course contents into real life by objectifying them.

- In instructional Design Models the characteristics of the target population are specified primarily.
- Relevant teaching strategies are chosen according to the level of the students and the content.
- In order to apply the strategies, the most available education environment is arranged.
- Based on the instructional design models developing the materials to be used during the teaching -learning process is provided.
- Needs are determined by analysing the problems (Keleş, Fiş Erümit, Özkara & Kaya, 2017; Şimşek, 2011; Trujillo, 2007).

5.1. ADDIE Model

ADDIE design model has a significant role in designing the course contents in open pedagogy (Dick & Carey, 2004; Fer, 2009; Marrison, 2010). This model is used by teaching designers at many educational instutition to redisgn course contents of well-attended, blended learning and on-line courses. As can be seen in figure 4 this model involves five basic stages: Analysis, Design, Development, Implementation and Evaluation (Mayfield, 2011).

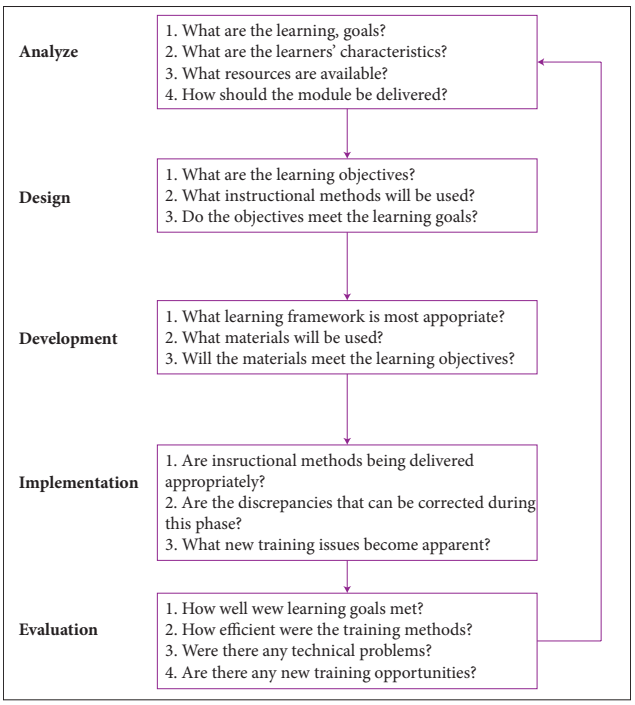

Figure 4. Addie Model (Mayfield, 2011).

During the Analysis Stage: When designing the course content, the needs of the individual, society and subject area are primarly specified. The goals of the education are based on the learner's characteristics and primary information, the policies and resources of the instution which is going to apply open education. The questions to be answered at this point are as follows:

- What are the learning goals?
- What are the learner's characteristics?
- What resources are available?
- How should the module be delivered? (Mayfield, 2011).

Design Stage: At the design stage of the course content, the teaching goals are specified primarily. Secondly the course content is determined and designed. In the third stage the staregies, techniques, methods to be used through the teaching – learning process and materials chosen correspondent with the goals of the lesson are improved. Finally, the evaluation means are created (Shelton & Saltsman, 2008). The questions to be answered at this point are:

- What are the learning objectives?
- What instructional methods will be used?
- Do the objectives meet the goals? (Mayfield, 2011)

Development Stage: The content and the materials to be used during the learning- teaching processs are developed at this stage (Özdilek & Robeck, 2009). When developing content and materials the following questions are to be answered:

- What learning framework is most appropriate?
- What materials will be used?
- Will the materials meet the learning objectives? (Mayfield, 2011).

Implementation Stage: The implementation of the lesson to be carried out by open education takes place at this stage. It involves the stages such as environment arrangement, budget preparation and teachers' training who will teach (Thomas, Mitchell & Joseph, 2002). The questions to be asked at the implementation stage are:

- Are the instructional methods being delivered appropriately?
- Are there discrepencies that can be corrected during this phase?
- What new training issues become apparent? (Mayfield, 2011).

Evaluation Stage: At this stage a developed draft of the teaching system to be used in open pedagogy is applied as a pilot study and then data and feedback about the program is given. With the data and feedback collected design, development and application help for the

Several questions to be answered at evaluation stage:

- How well were the learning goals met?
- How efficient were the training methods?
- Are there any new training methods?
- Were there any technical problems? (Mayfield, 2011).

5.2. Smith and Ragan Model

Smith and Ragan model is a system- based model which maintains systematic stages. It is learner-centred and aims to design an educational program relocating education to the centre (Smith and Regan, 2005). Smith and Ragan's design model is shown in figure 5. In this model there are analysis, strategy and evaluation stages. At Analysis stage the place where education takes place, the learners' needs and learning tasks are analysed. At the second stage test items are specified and writing and forming the instructions take place. The third stage is the evaluation. Formation, revision and correction of the education take place here (Akkoyunlu, Altun & Yılmaz, 2008; Smith & Ragan, Reigeluth, 1992).

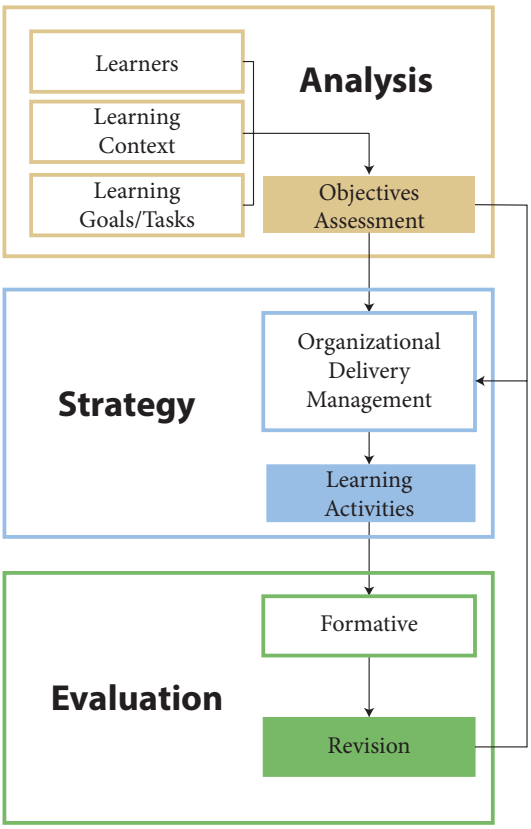

Figure 5. Smith and Ragan Model (Smith and Ragan, 2005)

Smith and Ragan Teaching Design is often used in open pedagogy enabling content-rich lessons (Molenda, Reigeluth & Nelson, 2003). As this model involves three detailed stages like analysis, startegy and evaluation it provides a significant advantage for planning and applying course contents for circumsatnces like open pedagogy.

5.3. Gagne, Briggs and Wager Model

In this model when designing course contents, the connection between the subjects is distinguished and learning models concept learning, rules learning and problem solving are used. There are some points that teachers should take into consider when planning classactivities. First objectives should be set and the sub-

jects to be taught should be divided into sub – objectives (Özdemir & Uyangör, 2011). Learning involves eight stages related to each other (Look at the Figure 6):

Figure 6. The Categories of Gagne, Briggs and Wager Model

In this model the learner gains attention and informed of the objectives in the first stage. In the second stage prios knowledge is recalled and the materials are presented to the student. In the third stage it is aimed to elicit performance by providing guidance. In the final stage feedback is provided to enhance permanency (Gagne, Briggs & Wager 1992).

It is emphised in the literature that this model is used to design course content in open pedagogy (Işman & Eskicumalı, 2001; İşman, Baytekin, Kıyıcı & Horzum, 2002). With the information given above, it is understood that Gagne -Briggs and Wagner Model consider learner as central in open pedagogy and also designs lessons to meet the needs of the learners.

5.4. Dick and Carey Model

Dick and Carey Model considers development of instruction as a systematic process and each item's role is taken into consideration (Fer, 2011). This model is classified into four items which are design, analysis, development and evaluation. Figure 7 illustrate this. In the first stage of Design, objectives are set primarily and needs assesment is applied. This stage is the starting point of instructional design. While setting the objectives the learner's needs are selected as baseline. The second stage is Content Analysis Stage. First of all, need analysis is done. There are two ways of analysing. In Instructional Analysis the skills required for achieving the general goals. The planner makes analysis to determine which steps are followed and which skills are used in these steps (Gagne, Briggs & Wager, 1992). In the learner's and context analysis, both instructional objective analysis and together with it learner's analysis is made. Also skills to be gained and involved in reaching goals are analysed in context. In the development stage Dick Carey & Carey (2004), emphised four significant points: writing performance objectives, developing evaluation tools, developing instructional stradegies and devoloping and selecting instructional materials. Evaluation is based on both planning and evaluating what is accomplished. The focus is on three basic points like evaluation and application of instructional design process, instructional correction, designing and application of result evaluation.

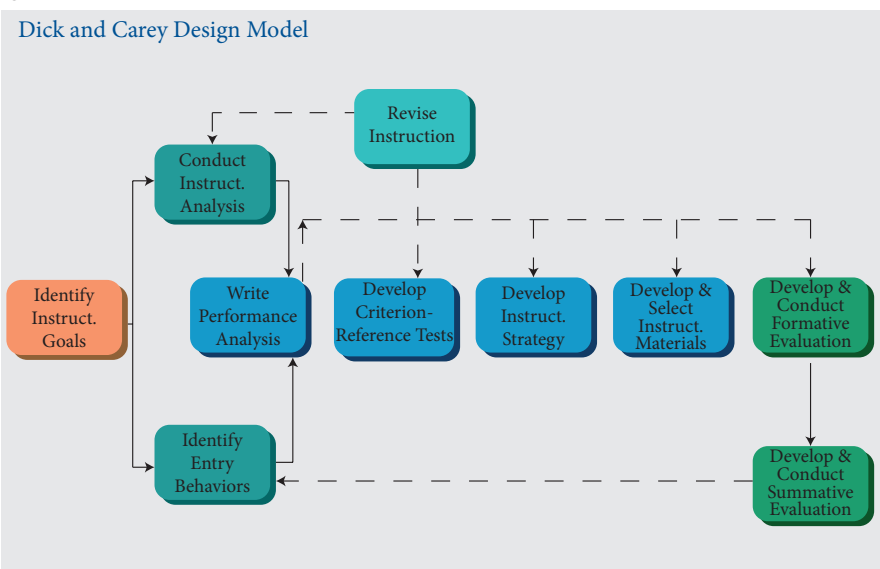

Figure 7. Dick and Carey Model (Dick & Carey, 2004)

Dick, Carey & Carey Model plays a significant role not only for the detailed organization of the course content but also for application and usage of these contents in the open education (Durak, Sarıtepe & Çakır, 2016). It is clearly understood that this model has a detailed process and with its instructional process and evaluation stages it enables course contents to be planned systematically.

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CHAPTER 7

THE EFFECT OF OPEN AND DISTANCE EDUCATION TECHNOLOGIES ON LEARNING PSYCHOLOGY

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Introduction

Distance education is a corporate education /training activity where students, teachers and teaching materials, in different places, are brought together through various communication technologies. Today, the distance education programs offerring the opportunity of time and space independent education, are increasing day by day and bringing many discussions together with them. In this section, the effective factors on students' and teachers' perspectives, their motivation, attitudes and learning psychology, on distance education will be examined.

When the studies that question open and distance education applications are examined, it is observed that the economic and mental readiness of the students is insufficient. The fact that distance learning requires the use of more technological materials than face-to-face learning, absence of face-to-face interaction and attendance in classes, negatively affect the attitude towards learning (Balıkçıoğlu, Öz and Çınar, 2019). In addition, the lack of effective involvement of instructors or faculty memebrs in the effectiveness of the programs is seen as a deficiency in terms of the expected goal. While the distance education programs are being prepared, reflecting the opinions of teachers based on their experiences to the practices, affects the motivation in learning, positively. Technology applications that facilitate the preparation of courses should not be evaluated, only, in terms of time, cost and number of participants, but a perspective of facilitating learning psychology should be sought.

Other perspectives, apart from this, continue to escalate the criticisms that distance education, which is expressed by both teachers and students, is not useful.

The problems such as providing education with inadequate infrastructure, inadequate technology usage of students, lack of access to computers and internet, are among the factors negatively affecting motivation in learning. The fact that the distance education students are more curious about and questioning the subjects such as exam topics, exam dates and attendance requirements, indicates the lack of some aspects related to learning motivation. Formal education in the perspective of contemporary education provides the opportunity of having access to information, questioning the information obtained, discussing matters in the classroom circumstances, testing the information or knowledge and converting it into behavior. While distance education professionals also prepare their curriculum, this necessitates the use of technological materials, based on this understanding, towards the objective of supporting the psychology of fictionalizing and learning (Şahin, 2019). The lack of verbal communication in most of the distance education systems, the malfunctioning of the instant feedback, and the compromise of social isolation among students due to the problems of using the same technical infrastructure for each course, have negative effect on the attitude towards learning.

The instructors point out the negative and unmotivated attitute towards the courses due to the low attendance of students to the common compulsory courses, lack of the level of readiness of courses and the necessity of their effort and/or enthusiasm to attend the courses (Kılıç, Bayrak and Karaman, 2017). Studies show us that the learning motivation is another factor that positively affects the success in distance education. The distance learning often comprises a source of motivation for students aiming a university degree. It is reported that, with the modular education that is formed according to the needs of the students, the participations in the course are high, the benefit received from the courses is pleasing, and the required benefit from the use of materials and the comprehensible lecturing of the teachers are procured (Yılmaz and Özkan, 2014). According to Ergün and Kurnaz (2017), creation of a classroom environment also in distance education, is reported to result in high class community feelings for students, and therefore to develop positive attitudes towards learning and increase of motivation. Studies carried out on this subject support that, the students with a strong sense of community are more likely to succeed and continue in the online learning environments than the students who feel themselves separated from the community. It is reported that the students with strong community feelings have their sense of isolation decreased, are satisfied from the education, and that the dropouts are thereby decreased (Ergün and Kurnaz, 2017).

Therefore, in order to improve students' learning performances in the online learning environments, according to Ergün and Kurnaz (2017), it is importantly

seen that the variables related to the sense of class community should be attached importance to. The difference between the learning motivation given by the students in the face-to-face classroom environments and the learning motivation given by open and distance education methods should be significant in favor of the distance education. In order to achieve this, improvements should be considered together with the preference tendencies of students.

When the preferences of the students in open and distance education are examined, it is thought that they are profitable in three subjects (Gül and Arabacı, 2018). These are;

- Self Improvement,
- No obligatory attendance,
- Possibility of remote participation in training or education.

Students mostly develop positive attitudes towards distance education according to the above three reasons. It is seen that, meeting the expectations in order not to break or diminish the learning motivations, is important. Gül and Arabacı (2018) put forward different findings that should be taken into consideration in the increase of learning satisfaction in education. These are;

- Increasing pilot tests,
- Allowing adequate study times between exams,
- Easy access to Distance Education System,
- Audio and video quality,
- Need for written resources, and
- Evaluation of students' demands.

Distance education has been spreading out in parallel to the meeting of the increasing demands of students. Özgöl, Sarikaya, Öztürk, (2017) and Kılıç, Bayrak, Karaman, (2017) refer to, in their studies, the advantages disseminating the distance education. These are:

- Providing different education alternatives, to people,
- Reducing inequality of opportunity,
- Providing relatively easier mass education,
- Attaining standardization in the education/training program,
- Providing financially cheaper education or training,
- Providing a more qualified education,

- Providing freedom to the student,
- Introducing a rich educational environment to students,
- Eliminating the space limit in education and training,
- Supporting individualized learning,
- Ensuring learning independence,
- Convenience in internet prevalence and accessibility,
- Stress-free training or educational environment,
- Teacher saves money.

Another problem area that reduces the motivation in learning, according to the feedback coming from the students about the open and distance education program, is the problem of not fully establishing a balance between formal education and distance education programs. In the courses such as; social service, psychology, and health sciences, which require field practice, a one-to-one relationship with the student-internship consultant and institution responsible teacher or manager, is required. For the development of students, it is required that; the internship attendance checks, necessary support during practices, and measurement and evaluation, are done with emphasis. In addition, it is suggested that the directions of development needs cannot be made effectively and efficiently through distance education (eg, inability to conduct student message feedbacks efficiently, and the lack of access to forms and guidelines due to technical communication problems).

Therefore, it is seen that the important element that is missing in establishing parallelism between formal and distance education methods, is an active consultancy service. Particularly in internship applications, students always need the presence of the experts, who will guide them face to face and enable benefiting from their experiences and who will increase motivation in learning. This need cannot not completely be met during the implementation of open and distance education methods, is supported by the following brief narration (Kılınç, Bayrak and Kahraman, 2017);

"... I can't reach the advisor; he/she must be very busy."

" I asked the counselor, and he/she didn't know, either… "

"I asked the counselor, he/she said 'hell, are you asking me on this?' "

Among other approaches lowering motivation in learning, the negative prejudices encountered in internship centers for distance education students, are in-

cluded. Among these prejudices, it is stated that students are inadequate in their own fields, they escape to port learning and take the easy way out, that their professional self-confidence will be defficient and it will be difficult for them to have acceptance in working environments. When planning open and distance education modules, it is important from the point of view of thinking in the way to increase the motivation in learning, increasing the efficiency and affecting the perceptions and attitudes, positively. Students mention about some criteria that should be considered in planning in order to increase the positive attitude in learning (Akçay and Gökçearslan, 2016). These are;

- Easy and cost-effective access to software tools are required for the students' use of modules,
- Simplicity and ease of use of the technological tools,
- Creation of interactive environments for teachers, students and classrooms,
- Ease of sharing and getting feedback,
- Uninterrupted and trouble-free technological infrastructure,
- Ease of teacher-student interaction.

When the opinions put forward by the academicians, regarding the benefits of the distant learning in the educational sciences, are examined, it is seen that they have majority of the ideas under the four headings (Kaya, Akyol, Uzbek and Pepeler, 2017).

These are;

- It is useful for the theoretical courses, in terms of its contribution to the educational program,
- It enables ease of connection to students, in terms of contribution to them,
- It is time-saving in terms of its contribution to the academician,
- It provides economic benefits, in terms of its contribution to the system.

Another factor that determines the success of distance education activities, is the definition of the roles / competencies that the instructors should have in online education environments and the conduct of necessary preparations to facilitate this process (Kapucu and Adnan, 2018). According to Kapucu and Adnan (2018), the educational institutions that decide to use online technologies in educational environments, should facilitate this transformation process by organizing

in-service trainings, workshops, meetings or purpose-oriented training programs. Again, according to Kapucu and Adnan (2018), it is important to ensure that trainers are introduced to new roles and competencies that they need to have, and perhaps most importantly, to ensure that they are exposed to effective, productive and continuous professional development activities enabling them to use their acquired knowledge and skills in real life without losing time.

Open Technologies on Learning

Yungul (2018) argues that, in music education, distance education technologies are a facilitating factor in learning. It is stated that the opportunities such as; meeting the needs of teachers, meeting the educational needs of students and working with expert trainers can be attained through distance education method. According to Yungul (2018), introduction of the modern education systems incorporating technological developments in music education, is considered important in terms of increasing the quality of education and training. The fact that the developments experienced today in the field of technology are very effective, especially on the so-called millennium generation population, arises from the the strong ties, of the individuals in this age group, enebled with the tools like; internet, computer, smart phone, tablet and so on. The use of technology in music education is seen valuable, in terms of facilitating learning, by introducing the learning portal with the student. Again, it is considered that it will increase efficient teaching because it facilitates access to experienced teachers both at home and abroad (Yungul, 2018).

The results reached by Demirkol (2019) in his study on the effect of distance education on learning in music education, provide a developmental way to increase learning success. These are;

- Regarding the adequacy of "Computer" education used in music education and given in undergraduate education, the participants answered as "Very Bad" and "Bad" at high rates. The ratio of participants responding positively is quite low. This situation suggests that the "General Computer" education given in undergraduate education is quite inadequate.
- Regarding the level of learning of the "Music Software" in undergraduate education, the participants answered as "Very Bad" and "Bad" at high rates. Again, most of the participants answered as "Very Good"and "Good" regarding their use of technology in their courses. In the light of both results, it is concluded that the technology is intended to be used to a large extent, but the general and technology given in undergraduate education are quite inadequate.

- It was stated by the majority of the participants that the music software was generally in foreign language and therefore they had difficulty in learning the programs.
- It was stated that most of the participants that they had the ability to use the websites in accessing the musical notes.
- Almost all of the participants stated that they did not receive distance education in the field of music, but the majority of the participants stated that they sometimes used to have the wish to get distance education in the field of music. It is seen that "Music technologies" is one of the main courses that participants want to take with distance education. When these results are evaluated, it is seen that there is a positive attitude towards technology in learning.
- It was determined that most of the participants did not use any musical note software program and those who had used it before, have learned through their own efforts and endeavors.
- It was found that most of the participants did not use any audio editing software and, to a great extent, they did not know the software and programs.

In the light of this study, it was put forward that; the material, technology and English proficiency levels of distance education of those who want to study music, should be sufficient.

Turkish Language Education

The universities implementing this education system provide compulsory university common courses such as Turkish Language, through the general network. According to Ömeroğlu (2018), there are several reasons for university administrations to make these courses more attractive to be given over the general network. At the top of these, are the "economic" reasons. The university administration, which controls the budget as well, wants to carry out more work with less expenditure. In distance education, virtual classrooms of 200-300 people are formed so that these lessons are given with fewer instructors. The other reason, on the other hand, is the matter of "time". When a lesson is given as formal, it is necessary to make room during the working hours to place the course in the program, but there is no such obligation in virtual classrooms and the course can be placed at the hours, either in the morning or at night, which are not convenient for education. In this way, for other courses rooms or places are easily opened in

the curriculum. The Turkish Language courses, which did not affect the average because previously they were non-credit courses and were ignored by the students, have then been credited and started to be considered like the other courses. This situation has been a positive development on behalf of the course. However, giving the course through distance education over the general network has negatively affected this process and has brought the problem to the agenda. Is it appropriate to provide Turkish Language courses thruogh distance education method, in accordance with the targeted objectives of the course?

Ömeroğlu (2018) replies this question, in relation to this matter, with his own study results. According to him, giving the Turkish language education via distance education method through the General Network, does not fully meet the aim of the course. Therefore, majority of the students reported that they do not find appropriate the Turkish Language courses to be given through distance education. In addition, he has the oppinion that, rhetoric applications, construction and written expression studies, required to be carried out in the Turkish langauge courses, cannot be done with distance education method. Therefore, it is understood that the students' interest, in Turkish language courses taken by distance education, is low.

Korkmaz et al. (2018) also pointed to a number of problems. These are;

- Adequate communication cannot be established between instructor and student as a result of the lectures not being explained interactively. For this reason, students cannot attend courses adequately and cannot use the method of question-answer adequately.
- Due to inadequacy of the technological infrastructure and various problems are experienced in conenction to the system, disconnections are experienced, from to time, in following the courses.
- Difficulties may be experienced in the transfer of features such as "being productive, prone to teamwork, having the ability to communicate, memorizing and accessing information, which are components of the student-centered education, with distance education. Especially the failure to meet the educational components reveal the need for learning psychology in distance education technologies. Korkmaz et al (2018) touch upon that there are differences to be taken into consideration in terms of learning success between undergraduate and associate degree students receiving distance education. They reported that the failure rate of associate degree students is much higher than that of undergraduate students. When the factors affecting the failure are evaluated, one of the

other important factors to be considered in distance education is the existence of the individual differences (Academic maturity, socio-cultural effects, academic language between teacher and student).

Therefore, what is needed is the technological infrastructure of the deficiencies seen in distance education.

Geography Courses

Yazıcı (2015) states that students have the opportunity to gain virtual observation, virtual evaluation and awareness in physical geography education course atatched to distance education. It is undeniable that computer technologies have a major contribution on learning. However, besides, the subjects such as the difficulties of working on the map and the lack of field applications are also pointed out. The students report that they expect more contribution on the subjects, such as; elimination of these deficiencies and improvement of the communication with each other and especially with the teaching staff. According to Yazıcı (2015), the most prominent problems are given below:

- Lack of visual material such as photography and video,
- Failure to reinforce the narratives in the field and the knowledge to remain in theory,
- State of the courses passing, wholly, as being just listened and the existence of passive learning.

Students find it important to pass the courses, actively, to integrate the information in the virtual environment with the application environments and to increase the permanence. These views are seen as serving to the basic objectives of education.

In line with the principles of geographic distribution, relationship building, comparison and causality, it is a necessity of contemporary geography education to transfer, the process, interpretation and teaching of the activities developed as a result of mutual interactions between human and natural environment and the events related to space, in their most colorful and striking aspects (Karadoğan and Aslan, 2004).

The fact that there is a lot of visual material in geography education provides great ease in the information-flow transferred to the student. However, in order to make this advantageous situation even more efficient, it is important to look for ways to meet student needs such as shortening the learning time and permanence of knowledge in memories.

History Lesson

Nowadays, thanks to the prevalence of technology that, most of the students have their own technological devices to follow their education and the good use of the internet and computer, provides an advantage from the point of the learning motivation. In distance education technologies, however, personal competence in the field of history education alone is not considered sufficient. Technical problems, lack of interaction in the classroom, quality of the training and education material, indifference towards the course and the problems of connecting to the internet, all cause negative attitudes about the failure of distance education among the students studying history (Öztaç and Kılıç, 2017).

In their study where Akbaba, Kaymakçı, Birbudak and Kılcan (2016) examined the participants' views on the functionality of making Atatürk's Principles and History of Turkish Revolution courses through distance education, they give the opinion that, despite almost all the students have a high level of interest towards the course, they do not regularly follow up the courses, and majority of them report the oppinion that the distance education application is not beneficial enough. This situation, which constitutes an obstacle in front of learning, is seen as a result of the lack of instructors, teaching methods and lack of teaching materials.

Theology Course

The distance method used in the Education of Theology Undergraduate Completion educations as a model of distance religious education, creates the expectation of learning approriate to traditions, in terms of reflecting both the characteristics of religious education and the social values. In theology education, beside cognitive gains, affective and behavioral gains have an important place. In obtaining the affective and behavioral gains, the activities and experiences above the program and which realize in the circumstances where teacher and student coexist, are effective. Although graduates are employed in different fields at the end of theology education, the society expects them to carry a religious role. The requirements of this social role are those matters that can be acquired, largely, in the circumstances where education is received and that can be obtained according to the environment of living. The same is true, in terms of the role of the clergy and the teaching of the Qur'an course, where the graduates may perform their duties, and even the role of practitioners in the areas such as teaching. Considering this education as, simply, a version of formal religious education realized through benefiting from the advanced technology and neglecting the unique pedagogy of distance education and developing and improving appropriate learning environ-

ments and materials, will reduce the efficiency of this education. Increasing productivity, on the other hand, depends on the improvements to be made as a result of examining the program, environment and processes of this education through benefiting from practical experiences (Kaymakcan, Meydan, Telli and Cevherli, 2013). The findings of the study indicate that the religious course has the characteristic of being experiential, that it supports the social expectations to be in the same direction and that distance education does not create gains for holistic learning.

Again, according to the researchers, the subjects that students complain about are presented here below (Kaymakcan, Meydan, Telli and Cevherli, 2013);

- Ineffectiveness of religion teachers to teach by using technological materials.
- E-books, face-to-face education and live-lecturing are perceived as the most productive learning environment, and besides, they reduce the learning motivation due to inadequacy of the infrastructure that reduces the ability to benefit from them;
- Students believe that a high level of assessment is not carried out fairly and reliably.
- The validity of the exam in the visa application over the Internet cannot be audited
- It was stated that the assignments could not be meticulously evaluated due to the crowded class-rooms.

In his experimental study on the effect of distance education on mathematics learning achievement, Yorgancı (2014) found out that this was significantly higher in the face-to-face education and learning conducted in virtual environment. In this study, Yorgancı (2014), after the teacher explained the subject in a virtual environment like a face-to-face classroom, he solved examples related to the subject and answered the questions of the students attending the course. The teacher made use of the smart board technologies while explaining the subject and the camera was kept open throughout the course. The students were able to interact with the teacher by using their own microphones or cameras while asking questions or sharing their thoughts. In addition, some students communicated with the teacher, individually, by asking questions through the private message section. Live lessons are then recorded with video and made available to the students who could not attend or want to listen the explanation of the course again (Yorgancı, 2014). With this study, it is concluded that, for mathematics education

and learning, the distance education in accordance with the contemporary education approach, has a positive effect on learning.

Biomedical Engineering, Physiotherapy and Rehabilitation Courses

The innovations of technology will undoubtedly open new pages in education. In human life, where time and labor gain significance, day by day, it is important to use these resources in the most effective way. Biomedical engineering is an interdisciplinary branch of science incorporating extensive medical and engineering knowledge. Although biomedical engineering education is not only an education that will be completed by distance education, but in order to increase and develop/improve educational activities, it is also realised and practised, in addition to formal eduaction, by using computer-aided technologies. Web-based training provides educational services for environments with limited learning opportunities, while at the same time it provides the opportunity to review the subjects prior to and revise them after the course. In this manner, time is saved as well as the efficiency of teaching is increased.

Considering the contribution of distance education to biomedical education, students are provided with the opportunity to access the resources they need over the internet, and again, to benefit from the auxiliary educational materials existing on the internet and get the opinions of experts thereon. In the trainings that are required to be carried out practically, on the other hand, it is possible to create the chance of using animations and video images in giving preliminary information and practical trainings, over the internet. Distance biomedical education alone cannot replace the biomedical education, especially in the social sciences. However, with the developments in distance education technologies, the development of optional programs, adapted to preference, for education and resources, preparation of special interactive courses on the process control in physiology, anatomy and forensic medicine, and preparation of database for medical electronics, create alternative solutions for countries where specialist educators and teaching resources are missing (Akman and Guler, 2008).

By carrying out the physiotherapy courses within the scope of distance education, on the other hand, the students reported a positive attitute by stating that the application provided time-space independence for them and that it improved their research skills. Among the negativities that break the motivation of students taking the courses, on the other hand, various issues such as; experiencing internet connection problem and not being able to send notifications through message or e-mail, were reported. The students also believe that web-based teaching is not

suitable for applied courses in physiotherapy and rehabilitation education, and that it can only be used in theoretical courses (Özüdoğru and Özüdoğru, 2017). The results of the study are important from the point of view of providing feedback to the implementers/applicators they need to consider in planning. As a result, the use of technology in health-related issues should be applied by creating realistic circumstances. The hologram technology developed in this field should be presented to the students, among the technological opportunities that will help gaining the practical experiences in examination, intervention and even in surgery.

Foreign Language Education

In most studies where foreign language education is conducted with distance education technology, it is reported that students' overall satisfaction levels are at medium level, although they give more positive opinions during the process. Other dimensions, such as; the dimensions of input, context and product, students' opinions are reported to be below average. Particularly, because they consider themselves inadequate in the matter of writing in English, emphasize the necessity of questioning the infrastructure of the programs, in this regard (Pepeler, Özbek and Adanır, 2018).

According to Yaman (2018), although the tendency to offer foreign language courses through distance education has emerged in recent years, it has been spreading to more universities every year. However, at the monent arrived, it attracts the attention that there are differences in the practice, regarding the inclusion of compulsory English in the distance education system. When it comes to distance education, the first thing that comes to mind is that it will bring benefits in terms of time, transportation and financial dimension. In this respect, it makes sense to apply English courses in the form of distance education especially for the students who are far away from vocational schools of higher education. Because sending instructors to distant areas, creates a disadvantageous situation in terms of transportation and monetary dimension. For this reason, most of the universities that initiate the distance education application, first started this practice in vocational schools in higher education and then spread it out to all units. According to Yaman (2018), it has been observed that most of the students prefer the distance education option to face-to-face education, for compulsory English course. Some universities carry out the course only on asynchronous courses and the student is content with the images and materials uploaded to the system.

Student can communicate with the instructor asynchronously again by using the correspondence options in the system. At some universities, asynchronous courses are supported by synchronous courses or weekly office hours are arranged

for the responsible teachers to meet with the students. When one considers all of these differences, it is seen that no common system has been embarked on, in the universities in Turkey, regarding the matter that the compulsory English courses can be given in distance education system (Yaman, 2018).

In the use of this system, the idea of saving from teachers, costs, time and workload predominates.

Computer Courses

In his study Balaman (2018) who investigates the effects of web based distance education and traditional education for internet programming course, the effect of web based distance education on learning is reported to be more efficient and permanent compared to the traditional method. In order to achieve this, students can reveal their individual differences in this environment, students have the opportunity to work anywhere and at any time according to their preference, and students find these environments fun and enjoyable, and all these make web-based education special in increasing the learning success. In addition, the education that is realised as web-based provides to students, a contributory opportunity for their learning success by using many different communication channels and through supplying different media and materials to them. It is seen that technological and technical problems play a role among the factors affecting the success, negatively. Some of the problems reached may include power cut, audio and video disruptions arising from low bandwidth (Balaman, 2018).

Yalman (2013) has carried out a study determining the satisfaction levels of the students, towards distance education, after the presentation of the courses in the curriculums of the students of the faculty of education with distance education management system. For two years (four semesters), education was carried out through the web site prepared with the distance education management system, that is Moodle (Modular-Object-Oriented-Dynamic-Learning-Environment), and after these processes and through a questionnaire prepared, students' levels of satisfaction for distance education system tried to be measured. The results indicated that if distance education was used in the conduct of their own courses, the academicians spent more time than the normal education method, and thus, it was more troublesome and difficult to carry out the process, therefore they did not lean towards or in the favor of the distance education. Among the factors that increase the success in distance education, the necessity of supporting teacher-lesson-motivation resources is put forward.

Standardization Requirement on Learning Psychology

Çiftçi and Doğan (2018), for a qualified and quality Open and Distance Education application, emphasized the importance of establishing standards, surely. In this context, they set forth what these standards in question might be within the scope of the opportunities offered by new communication technologies and of the basic principles and requirements of education. These are:

- Determining the individual characteristics / differences of distance learners, and structuring the content according to these differences and requirements,
- Distribution of the content through the most effective and efficient technologies that the learner may have access to,
- Evaluating the learning processes with technological innovations within the scope of the objectives of the program and the expectations of the learner,
- They are the subjects to be shown among the standards required to be carried out and by whom, to what extent and how often the the Internal and / or external control and audit mechanisms should be carried out for each open and distance education environment.

Establishment of the distance education standards is highly valuable in terms of increasing learning success. The fact that standardization will reflect the contemporary understanding of education, will increase the efficiency in learning in distance education, which is far from rote learning, creates interaction and application areas, ensures uninterrupted use of technological needs, focuses its priority on the quality of learning, and is structured within the frame of this focus.

As to what elements needed may be towards standardization, Kaban and Çakmak (2016), in the study they conducted among domestic universities, gathered the dimensions for the standards needed in the said study, under ten titles and 97 items. These are;

- Instructors,
- Curriculum and teaching/instruction programs,
- Measurement and Evaluation,
- Library and Learning Resources,
- Student Support Services,
- Institutional Operation/functioning,

- Course Development,
    - Teaching and Learning Process,
    - Mission of the Institution

Learning Objectives

Kaban and Çakmak (2016) introduced new and different perspectives while reaching standards supporting learning psychology. In addition to the general and valid features, the findings are summarized as follows:

- The teacher should be guiding, evaluative and active classroom oriented.
- The course planning should be the responsibility of the institution.
- Individuals with disabilities should also be able to benefit from the courses.
- Distance education programs should be compared with formal education in terms of institution, learning outcomes and satisfaction.
- There should be a unit of measurement and evaluation, in the institution, which is responsible for the assessment of students, teachers and the system in general.
- Resources appropriate to the needs, knowledge and experiences of the student should be provided.
- Lessons should be so designed to provide analysis, synthesis and evaluation of students.
- There should be an institutional mission and sufficient budget to support this mission.

The necessity of standardization in distance education is seen as a key element in learning success. According to Okur, Baş and Güneş (2019), it is said that, in the researches conducted in Turkey and the world, the school drop-out trends take place in relatively higher rates. Particularly in recent years, it is argued that, in the open and distance learning, it is advocated that some measures or opportunities should be created for the non-renewal rate's continuing to increase, for re-questioning this type of education process and also for reducing the drop-out rates. When the researches in the literature are examined, the main reasons for drop-outs or non-enrollments are enumarated here below (Okur, Baş and Güneş, 2019). These are:

- The idea of high tuition fees,
- Anxiety of failure due to the high level of concern for semester extension,
- Lack of learning materials required for the courses,
- Examination criteria,
- For those who do not have an academic or professional career expectations, giving up more easily in the face of negative events,
- Inadequate levels of basic information technologies.
- When all of these reasons are considered, some developmental ideas are presented for the open and distance learning program, which will make learning efficient and increase students' feelings of loyalty (Okur, Baş and Güneş, 2019). These are:
- Databases can be formed by conducting researches on the reasons for dropp- outs and necesary strategies can be developed to prevent possible drop-outs,
- Trainings can be given to increase the basic information technologies level of the students,
- In order to Increase the level of interaction, in open and distance learning programs, the increase of the frequency of entering into interaction with various components such as; chat, discussion board, private messaging or face-to-face interaction, can be procured,
- Since open and distance learning is based on self-learning, the diversification of learning materials can be achieved by considering the students with different learning styles,
- The dropped out students can be provided with online e-counseling to continue their education.

In standardization, the perfect functioning of a measurement and evaluation is an important factor in terms of ensuring the quality of the lesson and the discipline of learning. Şimşek (2012) has reached some conclusions in his own study while investigating the factors that lead to the quality of the course. These are;

Educational Effectiveness

- The learning outcomes envisaged in the programs, cover all the minimum knowledge, skills and attitudes required by the relevant professions.

- The learning activities offered to the students are sufficient for them to gain the expected learning outcomes.
- Students graduate by acquiring the expected learning outcomes foreseen in the programs.
- Students grow up well enough to adapt themselves to business life.
- Almost all of the students enrolled in the programs, graduate.
- Financial Efficiency
- Almost all of the students graduate within the prescribed periods.
- The rate of students leaving the programs is not very high.
- The rate of students leaving the programs is not higher than the face-to-face education programs in the same areas.
- Expenditures for students' education are not higher than face-to-face education programs in the same areas.
- The University spends more efficient resources on distance education programs than face-to-face education programs in the same fields.
- Through the programs, more students are provided the opportunity to learn, than through face-to-face education programs in the same fields.
- It provides learning opportunity for individuals who cannot benefit from face-to-face education programs in the same fields for various reasons, through the programs.
- Accessibility
- All compulsory learning activities are accessible to all students.
- All students in need may receive adequate support from student affairs services.
- All students in need may benefit from academic counseling services, adequately.
- All students in need can easily benefit from library services.
- Students may have access easily to electronic environments that enable them to communicate with other students in the same program.
- Easily accessible technical assistance is available to all students during their studies.
- There is a structured and well-functioning system related to student complaints.

- Students can easily reach the instructors from whom they are taking courses, by using the electronic communication media provided to them.
- Instructor Satisfaction
- The physical (office, classrooms, studio, etc.) conditions used by the instructors, are sufficient in carrying out the tasks assigned to them.
- Technical facilities (hardware, software, materials, etc.) used by the instructors are sufficient when performing the tasks assigned to them.
- The faculty members or instructors are satisfied with the duty related technical assistance and support services provided to them by the university.
- The wages and payments received by the instructors in return to their work are satisfactory.
- The instructors do not have any significant complaints about the quality of the tasks assigned to them.
- The distribution of tasks and duties among the teaching staff does not create a sense of injustice among the teaching staff.
- The teaching staff is not disturbed by the decisions and attitutes of the administration in relation to their field of duties.
- The communication environments provided to instructors are sufficient, for them, to communicate with students.
- The faculty members are satisfied with the structure and content of the programs they work for.
- Student Satisfaction
- Students are pleased with the courses taking place in the programs they are studying.
- The contents of the courses included in the programs are consistent with the expectations of the students.
- Students are pleased with the work- out or process of the courses.
- The students are pleased with the means of communication provided to them to communicate with other students.
- Students are pleased with the opportunity to communicate when needed with the instructors.
- Students are pleased with the student affairs services provided to them.

- Students do not have any significant complaints regarding the library services provided to them.
- The students are pleased with the assessment and evaluation services applied for the courses.

In distance education for children, it would be beneficial to think of learning, among standards, by having fun with animations similar to game-based learning. Because the animations used in the web environment, have the position of being an important tool that increases the efficiency of teaching. The animations used, make learning effective, provide feedback related to understanding of the subject and embody abstract subjects by separating them from the most important parts. Overuse of the multimedia applications such as; vocalization, text, animation and simulation, to make the material suitable for every teaching style, in every sense, motivates the students (Erümit, 2013). Therefore, inclusion of the standard amount of compulsory use in the planning will increase the course success.

According to Akkuş and Acar (2017), as a result of the data obtained from the interviews conducted with students, they reported that, the technical problems experienced in the simultaneous learning environments, the interruptions experienced in the system and in the network, are at the top, and that, with this, in the simultaneous learning environment and the participation of the learners in the courses that they conduct on web-based systems, the interruptions are caused in the system due to overload. Another step to be taken in the direction of standardization should be to determine the efficiency levels of the course operating systems. Thanks to such technical problems, students think that these problems are not in face-to-face learning and may show negative attitudes towards distance education technologies.

Conclusion

In this study, learning attitudes, motivations and their effects on the course success in the use of open and distance education technologies in the field of education were tried to be revealed. The literature studies on this subject have been examined and the related results have been evaluated. The conclusions reached as a result of the evaluation are presented here below:

Student Attitudes in Choosing Open and Distance Education

- Willingness to develop oneself
- Enabling Media Freedom

- Existence of No Obligatory Attendance
- Providing Distance Education
- Institutional Attitudes in Choosing Open and Distance Education
- It saves cost, time, teacher and planning.
- It provides access to large group of students.
- It provides ease of application.
- It enables the opportunity to benefit from domestic and international teachers, who are experts in their fields.

Social Prejudices in Open and Distance Education

- Open and Distance Education cannot Replace Face-to-Face Education.
- It is inadequate in terms of academic qualification.
- Includes rote learning, laziness and thinking simple.
- Open and Distance Learning Students have hard times in Finding Job.
- There is no academic trust towards them.
- Factors Affecting Learning Success negatively in Open and Distance Education
- Uncertainty of Minimum Common Standards
- Lack of Technological Infrastructure
- Lack of Interactional Contemporary Educational Planning
- Lack of Resources
- Lack of technology support and consultancy in Applied Courses
- Technical Problems

Discussion and Conclusions

Open and Distance education will undoubtedly continue to develop rapidly in the digital age. The studies have the quality to support the tendency in this subject and what needs to be done is the transfer of educational technologies in accordance with contemporary education understanding. It is understood that trying to teach with the programs of inadequate infrastructure, breaks students' learning motivation, creates negative attitudes and reduces their course participation. Again, in order to eliminate social negative prejudices against students, it is

necessary to provide minimum standardization of the education infrastructure, in all aspects. In this way, corporate vision, financial and technological competence, education-oriented planning, will gain importance. Enrichment of technological materials in a manner of meeting educational objectives should be ensured in the courses that require integration of talent, application environment and historical feeling.

As a result, it is thought that, in open and distance education, it will be possible to increase the preferability by providing quality education support instead of seeking profit, by creating conformity with measurement and evaluation standards, and without taking the easy way out and avoiding costs.

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CHAPTER 8

PARENTAL INVOLVEMENT FOR LITERACY ACHIEVEMENT IN FIJI CLASSROOMS

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Introduction

Children's learning and acquiring knowledge has always been deliberated to be paramount by the Fijian Ministry of Education. Recently, the Ministry of Education has been stressing on the significance of literacy achievement and has devised strategies to advance literacy skills of children. In order to instill literacy skills in children, measures have to be undertaken which can be valuable not only to the students but for all the stakeholders of the education system, including parents, teachers, and the wider community. In light of Circular number 6 sent by the Ministry of Education to all school Heads in Fiji this year titled: ***Parental Engagement in Education,*** it has been more than ever needed for both parents and guardians to be instrumental in providing scaffolding to their children. Thus, this study aims to address this critical issue by approaching parents and guardians to identify the extent to which they are occupied in their children's studies plus what benefits do parental/guardian involvement have on the holistic development of their child, primarily focusing on literacy achievements and the end result attained by their child after a successful completion of a Grade/Level/Class in Fiji schools.

"Of all the factors affecting a child's education, the home influence in terms of parental support and intervention, ranks amongst the highest. The emergent shift to a more 'child-centered' learning also supports the importance of parental engagement. Studies have shown that parental engagement has had an enduring and positive impact on many indicators of a child's achievement and in realizing his/her full potential" (Ministry of Education, Heritage & Arts, n. d.: 2).

Significance

The findings will assist the Ministry of Education (MoE) in Fiji and other Pacific Island countries towards improving their engagement in allowing parents/guardians to be equal stakeholders in their children's literacy attainment process. In addition, with the current climatic risks directly affecting Fiji, it is more than ever needed for parents and guardians to be fully conscious and entailed in their child's erudition in terms of the delivery of the syllabus and constructing meaning out of it. There is an urgency to conduct research in this area as currently there are no contingency strategies in place for the MoE in terms of parental entailment other than through parent-teacher meet organized by schools in Fiji on a termly basis. The study will form a premise and fill in the void in this area of exigency. This research will also contribute to the scholarly study and literature as there is a dearth in this area here in Fiji and the Pacific. It will also support and provide insight to other educational institutions in Fiji to ensuring parental/guardian involvement and support in school work in order to create Fiji a knowledge based society. The study further aids the learners and facilitators to be better trained for the contemporary needs of students in Fiji.

In addition, literacy being a buzzing topic for discussion in MoE, it should not be seen as merely a school agenda. It is vital for parents and guardians to be conscious of the important input they can aid in towards their children's literacy accomplishments at home. Indisputably, literacy is an intricate skill which requires an encouraging environment and it takes years for one to master the skills of literacy. Parents can certainly find this teaching endeavor challenging, however, parental involvement towards the improvement of children's reading, language and writing must be encouraged.

With the Bainimarama government's initiative of free-to-all education for students up to Year 12, bus fare scheme, TSLB, access to tertiary education and myriad other benefits for children, there is an urgency to ensure that students successfully complete schooling and contribute to making Fiji a knowledge based society. Thus, the onus is now on parents and guardians to ensure that their children do well in school so that they are not At -Risk Students. The more Fijian parents will entail in their children's work, the better the final results will be. Weinberger (1996) puts it: "Parents' reading to their children in the pre-school years is regarded as an important predictor of literacy achievement". "This parental activity is associated with strong evidence of benefits for children such as language growth, reading achievement and writing" (Bonci, 2008: 8).

Most parents would claim that they often listen to their child while he/she reads. This habit formation in parents is a passive means of aiding their children to read. Research explicitly depicts that when parents who communicate and actively relate to their children and listen to their child's reading elevates their ability to comprehend better and also adds value to the activity (Greenhough et. al. 1998). Besides, the notion of engaging in other forms of reading activities such as shared reading, whereby the parent and child read together, in particular the parent reading aloud and the child following up on their reading fosters successful reading skills to be developed in their children (Close, 2001).

Aim of this Study

If meticulously implemented, involving parents and guardians in children's education, ranging from reading activities, to problem solving, to other learning needs can prove productive. Parents' intervention will work well for slow readers or dyslexic children as well. The study investigates the effect of parental assistance and guidance in children's education. It also identifies the elements of parental support which positively impact on children's literacy achievement. Through this research, some of the best practices through which parents and guardians can be involved in children's literacy achievement will be suggested. The study produces a comprehensive literature review from reliable research sources to prove that parental involvement is beneficial to children's literacy achievement.

Research Questions

To fulfill the rationale of this study, this research was governed by the following overarching questions: (i). Are the parents and guardians in the area of study involved in their children's reading activities, (ii). How much time do parents and guardians have for their children's education, in particular towards reading activities, (iii). What are some ways in which parents and guardians involve themselves in children's education? and (iv). What could be the best possible way to encourage parents and guardians to get concerned about their children's literacy enrichment?

Research Method

The study entailed a mixed method approach – quantitative and qualitative. Questionnaires allow quantitative analysis while unstructured interviews will provide information for qualitative analysis. The questionnaire comprised of a range

of questions related to the topic of this research. A survey research design was adopted in which questionnaires were used to collect information from the respondents. Quantitative method explains the phenomenon through the numerical data while qualitative research will allow collection of culturally specific information such as the principles, opinions, conduct, and social status of particular groups of people. Interviews using the questionnaire were conducted as means of obtaining qualitative data from the parents of Vutuni and Varadoli, Ba as key informants. In-depth semi-structured key informant interviews were undertaken with two MoE officials involved (n = 2). Structured interviews were also conducted with the parents (n = 20). The interviews were taken in English and iTaukei language focusing on eliciting information concentrating on Circular 6. Communication in iTaukei language was carried out and interpreted by a translator who was engaged to assist the interviewers.

Study Sample

The area of study was rural and an urban settlement, that is, Vutuni, Ba and Varadoli, Ba respectively in the Ba District. The target population for the study will be parents residing in the chosen areas as this is both an agrarian community as well as urban which has a dense population comprising of active learners attending primary and secondary schools respectively. A total of 200 parents were selected randomly residing in the aforementioned areas as this area has many primary and secondary schools nearby. Variables such as participants' background, ethnicity, gender, knowledge on the subject of study, and interest in studies were considered while selecting the research population.

What is Parental Engagement?

Children learn in many ways using varying methods. Each child is different from the other, thus requires a method suited to him/her. Formal education has been in practice for centuries, however, with formal education, it is important to support children to achieve higher. This support can come from teachers, facilitators, friends, parents, guardians and family members and relatives.

Parental engagement would thus mean the involvement of parents in their child(ren)'s education. This can be done in a number of ways such as, keeping track of what the child does at school, being interested in the child's school work, being a member of the parents' association, talking to the child to discover knowledge and to monitor progress, visiting the school to discuss and support the child during school organized events like sports. "Considered broadly, parental engage-

ment consists of partnerships between families, schools and communities, raising parental awareness of the benefits of engaging in their children's education, and providing them with the skills to do so" (Emerson, et. al., 2012: 7).

Close (2001: 7) states that parental engagement "refers to both the spontaneous informal contributions of parents and careers towards children's learning in the home and the formal organized inclusion of parents and careers in programmes that target children's literacy skills in the pre-school and school years".

Significance of Parental support/guidance in children's education

Education is a priority in many Fijian homes and "literacy is not merely a school agenda" (Close, 2001: 8). The Fijian Ministry of Education also places a huge emphasis on the importance of attaining quality education to improve literacy in families and the nation as a whole. To ensure children of school age attend school, the Ministry has some benefits in place such as free education, bus vouchers to travel to and from school and the student loan scheme and National Toppers Scholarship to encourage higher education. With these initiatives in place, parents and guardians are slightly relieved of the financial burden in sending their children to school. This means parents can now focus on their child(ren)'s education to ensure effective learning takes place.

Parental engagement is vital for myriad reasons ranging from academic excellence to personal development. According to Epstein (in Richardson, 2009), parental involvement is the most powerful influence in a child's education. Research findings suggest that parents' attitudes, along with their behaviour and activities with regard to their children's education, do affect academic achievement in a positive way (Hui-Chen Huang and Mason, 2008). Henderson and Berla (1994) also claim that parental involvement in their children's education affects their school attendance, more students graduate, and behaviour of students' improves.

Moreover, "in the political realm, parental influences on children's learning are being linked to intellectual and social skills perceived to be essential for the 21st century" (Close, 2001: 7). However, "while research supports the notion that parental engagement may positively impact student academic attainment, there is an important distinction between involving parents in schooling and engaging parents in learning; it is the latter that has shown to have the greatest positive impact" (Emerson, et. al., 2012: 9).

Children who come from reading oriented homes, where books are readily available to them and their parents are avid readers, have a tendency to score higher on reading achievement tests than children from less reading oriented homes. It also affects their literacy skills to have their parents read to them. Close (2001) states that children who are read to at an early age tend to display greater interest in reading at a later age. Likewise, (Arnold and Whitehurst, 1994) also state that story reading at home heightens children's language apprehension and expressive language proficiency. In addition, writing is also developed due to the language acquired from parent-child reading (Crain-Thoreson, et. al. 1999).

Those children, who do well in literacy at the age of 7, have their favourite books at age 3 (Weinberger, 1996). Snow (1991) also highlights that reading proficiency is related to the accouterment of books at home and discussion on the content of books and expectations of academic achievement. This is again confirmed by Brooks, et. al. (1997) who states that little leisure reading leads to low achievement. Thus, "parents can have positive effects on their children's reading skills and boost their reading comprehension by reading to them and making sure there are always books available" (Erlendsdottir, 2010: 25).

Parental involvement in child's education also benefits learning the various disciplines on offer at school. "Students whose parents are involved in their education are more likely to perform better in math and achieve more than other students" (Erlendsdottir, 2010: 25). Yan and Lin (2005) also claim that the higher the expectations parents have for their children's mathematics achievement, the more the children achieve. In addition, there appears to be a large body of evidence that suggests the home environment not only affects students' achievement, but also their abilities and attitudes towards math (Sheldon, 2009). Findings from a study that Sirvani (2007) carried out also showed that students with involved parents reached higher mathematical achievement than other students.

Likewise, a study by Senler and Sungur (2009) revealed that parental involvement is connected to how students perceive the subject, and thus their attitude towards it. Those students, whose parents make time to talk with them about science, who have confidence in their children's ability in science, and who have higher expectations, are inclined to be more interested in the subject. In addition, "when it comes to higher levels in science, these students are more likely to succeed" (Erlendsdottir, 2010: 28). "Research has shown that of all the different types of parental involvement, parents report that helping their children with homework is particularly effective for enhancing their academic achievement" (Erlendsdottir, 2010: 30).

Other than improving performance in studying the various subjects, students can benefit greatly in their social development. Parental involvement is also important for students' social and emotional development (Sanders and Sheldon, 2009). "Students who have parents that are involved in their education have been shown to have a higher motivation to achieve in school and a higher level of school engagement" (Erlendsdottir, 2010: 29). Getting parents and guardians involved in children's education or overall school related activities assists them in many ways and this improvement can be a holistic one.

Parents Roles

According to the Center for Comprehensive School Reform and Improvement (Obeidat and Al-Hassan, 2009; 124-125), successful parental involvement may be defined as "the active, ongoing participation of a parent or primary caregiver in the education of his or her child".

"Parental engagement requires careful and thoughtful approaches that reflect the exigencies of family life, the realities of poverty and low literacy levels, and the complexities and uncertainties of parenthood for many adults" (Close, 2001: 8).

At home, parents can demonstrate their involvement in different ways; such as by reading for their child, assisting with homework, and having regular discussions about school or school work with their child. They can also support their child(ren) at home by ensuring that they have a space to do their homework, providing necessary materials needed for school and assisting with homework and other school related work (Emerson, et. al., 2012).

In addition, "it is important for parents to convey their expectations to their child's education" (Erlendsdottir, 2010: 25). Research findings have identified certain aspects of parental behaviour as important indicators of lower levels of truancy among students (Sanders and Sheldon, 2009; Sheldon, 2009). These include monitoring student's whereabouts, discussions with their children about school, volunteering at school and being members of a Parent-Teacher Association

Emerson, et. al. (2012) state that parents need to be involved in academic socialization to see better results. "Academic socialization describes certain kinds of parental behaviours which have a demonstrably positive impact on learning and academic outcomes" (Emerson, et. al., 2012: 9). These can be in the form of:

- conversations about expectations from parents and learning with enjoyment;
- considering learning methods with children;

- relating school work to real life settings;
- advancing educational longings and preparing for the future;
- ensuring an inspiring home environment, rewarding learning;
- focusing on children's ability to make decisions and solve problems; and
- assisting in maintaining the children's freedom and academic abilities.

In addition to the above, parents and guardians can involve themselves in children's reading activities to further enhance literacy achievement. A research carried out in Haringey proposed that children whose parents listen to them while they read performed much better than those who only get assistance from their teachers (Hewison, 1998).

Overall, school and the classroom is one medium through which children can be molded but for enhanced results parents and guardians must play their part and assist their children in whatever ways they can.

The Role of Schools

Research has suggested that the extent of parental involvement depends, among other things, on how frequently the school approaches parents (Glasgow and Whitney, 2009). Epstein (2009) also claims that in order to get parents involved, it is important to include parents in developing, reviewing and improving school policies that affect students at the school. This will allow families to have some input in decisions that affect their children's education.

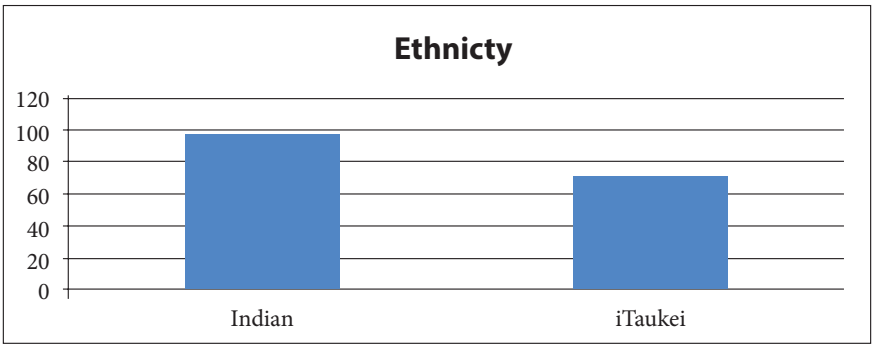
Schools must ensure that parents and guardians are well informed about the school culture, functions, programmes, classes, and other areas that affect students. "Communication between parents and the school can contribute towards shared learning goals to reinforce children's out-of-school learning (Duckworth, et. al. 2009, cited in Emerson, et. al. 2012: 40). Among other things, schools can suggest questions to parents which they can ask their children, design interactive homework activities which need the involvement of parents and provide advice to parents and guardians through workshops and seminars.

Moreover, school websites, emails, text messages can also be used to communicate with parents and guardians. The schools generally need to be now more creative and come up with ways to engage parents. In this fast developing world parents too are busy focusing on many things on a daily basis and a school's role in keeping them engaged in their day-to-day running will be beneficial.

Results and Discussion

Respondents Ethnicity Composition

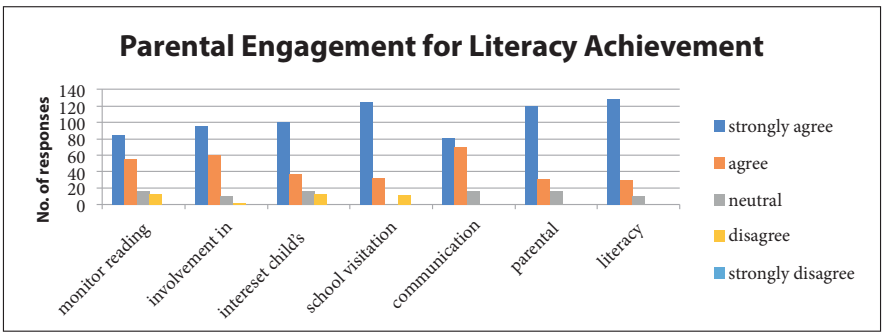
A total of 200 parents were selected randomly residing in a rural and an urban settlement, that is, Vutuni, Ba and Varadoli, Ba respectively in the Ba District. Of the 200 questionnaires distributed, only 168 were returned. 32 participants did not return the questionnaires making it 16% not participating in the study. Graph 1.0 depicts respondents' ethnicity composition for quantitative study. 84% respondents engaged in filling up and responding to the questionnaire. Of the 168 participants, 97 were of Indian descent while 71 were iTaukei.



Graph 1.0 Respondents Ethnicity Composition

The questionnaire had two sets of questions: one focussing on parental engagement for literacy achievements, while the other component concentrated on the ways in which parents aided their children in their literacy and numeracy programmes. The first two research questions were analyzed with the help of questionnaires in the five point Likert type scale ranging from 5 (strongly consent) to 1 (strongly oppose). This was utilized in the study to concentrate on the two questions to comprehend the theoretical and practical association of parents and guardians in their children's schooling.

Parental Commitment for Literacy Attainment



Graph 2.0 Parental Engagements for Literacy Achievement

Prior studies demonstrate that parents play a critical role in their children's education programme. Keeping this in mind, the Fijian Ministry of Education, Heritage and Arts introduced Circular number 6 sent to all School Heads in Fiji in 2016 titled: *Parental Engagement in Education.* The Circular aimed at both the parents and the guardians to be instrumental in providing scaffolding to their children. In light of Circular 6, the study through the questionnaire to 168 respondents collated parents/guardians engagement in their children's educational needs. Graph 2.0: Parental Engagement for Literacy Achievement shows seven areas where parents assisted their children primarily aimed at enhancing literacy achievements. For the question on '**monitoring and spending quality time on their children's reading and writing'**, 50% parents strongly agreed, 32% agreed, 9% gave a neutral response and 7% disagreed. This depicted that half of all the respondents in the study were strongly engaged in their children's reading and writing component. This is a fair indication that 85 parents/guardians took reading and writing as crucial skills that needed their engagement to assist their children.

Second question concentrated on whether the parents/guardians 'understood school work.' No doubt, children in Fiji get take-home assignments almost every day, mostly known in Fiji as 'Homework'. Parents are thus made aware of their children's school work that they do in school and homework given after each lesson or topic of study. With times evolving, children's syllabus too are getting complex, hence there is a need for parents to understand the nature of work their children engage in. Through this study, the researchers found that 96 parents strongly agreed to understand their children's school work while 61 parents out of 168 respondents agreed with 10 giving a neutral response. 1 out of 168 however disagreed.

Third question in the questionnaire under the first section on parental engagement for literacy achievement focused on whether the parents/guardians '**felt interested'** in helping their children improve his/her reading and writing. 101 respondents strongly agreed, 38 agreed, 17 gave a neutral response while 12 disagreed to being interested in helping their children with the two skills of reading and writing. 60% respondents were strongly in favour of being interested in their children's reading and writing skills. This is a clear indication that parents through Circular 6 are made cognizant of their role in helping children with literacy and numeracy skills.

Question four concentrated on parents/guardians **'school visitations'** to check their children's progress in school. Usually in Fijian schools, there are three visits per year. These visits are scheduled after each term end examinations. It is mandatory for parents/guardians to attend Parent Teacher Meets (PTMs). The PTMs are ideal time for parents to speak to the class and subject teachers on their children's overall performance, academic and extracurricular activities. Study illustrated that 44% respondents strongly agreed to making visitations to their child's school to check the progress made. 19% respondents agreed while 12% disagreed to making school visitations. Data collected provides an indication that not all parents are taking heed of mandatory school visitations. This may have an impact on their child's performance. Graph 2.0 depicts respondents' school visitation numbers.

Fifth question addressed to the respondents focused on **'means of communication'** by the school about children's performance. The present day and age is advanced and at the same time fast paced. While the Fijian MoE mostly communicates its messages to the schools through Circulars sent via emails, the schools then use a similar means to communicate to the parents/guardians. The questionnaire asked the respondents whether schools primarily communicated with them via email, phone and/or letter. 81 respondents' strongly agreed to the aforementioned means of receiving communication from their schools. 70 respondents agreed while 17 were neutral with their response. Study indicated that 151 out of 168 respondents generally agreed to being communicated about their child's performance. This result shows that the school uses various means to communicate to the parents and they too receive information in return.

Question six centered on **'parental engagement benefits'** in the child's performance. Here, the respondents were asked whether children showed heightened interest in their school work when parents/guardians were engaged with their schooling. Results depicted that 71% respondents strongly agreed to this idea of parents showing interest in their child's work and then they achieve a desired goal. 19% agreed while 10% shared neutral response. A total of 90% respondents were

in favour of their engagement in their child's work revealing more interest from the child thereafter. When parents were engaged in the child's school work, the result was positive according to 90% of the participants. This shows that when parents take ownership and entail in their child's school work, children automatically show heightened interest in their school work.

Seventh question aimed at **'literacy enhancement'** through parental engagement focusing on the extent to which the child has improved his/her literacy skills due to the parents/guardians involvement. 128 respondents strongly agreed seeing vast improvement in their child's literacy performance due to their involvement. 30 agreed while 10 provided neutral response. It can be said that when parents showed involvement in their children's literacy skills, they showed improvement.

The first section of the questionnaire aimed at parental engagement for literacy achievement, explicitly depicted that when parents/guardians took ownership, interest and showed the willingness to assist their children in their school work and homework then the end results were a desired one. Circular 6 of Fijian MoE did make an impact and improved involvement of the parents. The Circular somewhat compelled parents/guardians to start showing interest in their children's literacy and numeracy programmes. The Circular had been sent to parents through the school heads and impressed upon its importance and the endless benefits it brings with it for the betterment of the child.

Furthermore, the schools have played a crucial role in disseminating the contents of Circular 6 to the Fijian parents at large. Also, the schools have begun to engage parents as much as they can in their child's school work by constantly and consistently communicating with them. The different modes utilised by the schools such as email correspondence, through phones, and letters have played a vital role as well. Overall findings from the research illustrated that when parents were made to play a role in their children's literary and numeracy skills, the end results achieved by the child/pupil was an improved learning outcome. Thus, it can be said that parental engagement, assistance and guidance have a positive bearing on the child's learning needs. The manner in which it is implemented now through Fijian MoE, involving parents and guardians in children's education, ranging from reading activities, to problem solving, to other learning needs proves to be a productive undertaking. Research findings explicitly portray parents' intervention work well for slow readers or dyslexic children as well. The seven elements of parental support positively impact on children's literacy achievement.

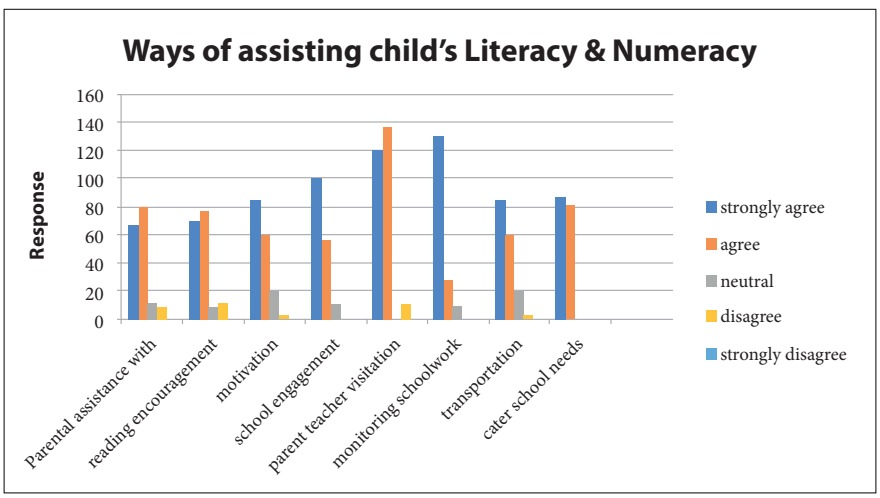
Ways of assisting child's literacy and numeracy needs

The second component of the questionnaire looked at eight ways in which parents help their children improve his/her literacy skills. This portion of the questionnaire also required the respondents to answer in the five point Likert type scale ranging from 5 (strongly consent) to 1 (strongly oppose). Graph 3.0 somewhat complements Graph 2.0, however, here eight ways are listed that parents/guardians can get entailed to enhance their child's literacy skills. Parents play these roles when the child is home after the school hour's finish. 67 out of 168 respondents mentioned their **direct involvement in their child's take-home assignment**. Children in Fiji schools are given 'homework' almost every day. The density and frequency increases as the child goes to higher level. The nature of work also changes as the child progresses from one level/grade to another. In classes/grades where students sit for national exams, the frequency of 'homework' increases. Field study depict that 80 respondents agreed to engage in their child's homework. 12 mentioned neutral response while only 9 respondents out of 168 who filled in the questionnaire said they did not assist their child with homework. Overall, 88% respondents were strongly agreeing to help their child with their homework. These show that Circular 6 sent by Fijian MoE did impact the parents in redefining their roles and responsibilities in the learning needs of their child. Added to that, as recollected by one of the parents in an interview, "When my child is given any homework by the teacher, I make sure I see to it and try to assist in whichever way I can" (Vutuni, Ba Parent interviewee, personal communication, 18 July 2017, Vutuni, Fiji).

As per the field study, other means in which the parents assisted their child to harness their literacy skills were through **intrinsic motivation such as encouragement**, increasing interest in their pupils school work, scaffolding approaches to name a few. For encouragement while reading, study conducted revealed that 41% of the respondents strongly agreed in encouraging their child in his/her reading work at home, while 46% mentioned that they agreed in providing encouragement during their child's reading sessions at home. This means that a total of 87% respondents provided at least some sort of encouragement to their child while reading. This is an indication that the more the parent/guardian is involved in any form of intrinsic motivation, the more progress the child makes. Parental intrinsic motivation thus has a bearing on the child's reading. Further, as recollected by one of the parents during semi-structured interview, "I always motivate and encourage my child to excel in the school work since I know that when I show interest in my child's school work, her overall performance improves" (Varadoli, Ba Parent interviewee, personal communication, 18 July 2017, Varadoli, Fiji).

Another way in which parents engage in their child's work is through their **active participation in school based 'in-house programmes'**. In Fiji, schools organise a range of event, programmes, awareness sessions, awards programmes, inter-faith activities to name a few. The school then sends invitations through students to their parents/guardians to take part in. The school does this to showcase to the parents/guardians that they also focus on the holistic development of the child. Thus, parents/guardians are encouraged to partake in these school based programmes. Hence, the field study depicted that 101 respondents out of 168 strongly mentioned that they entailed in school programmes of their child, while 56 just agreed. Only 11 were neutral with their response. This means that 157 out of 168, making it to 93% respondents with direct participation in their children's school programmes. This indicates that parents engagement in their child's school based programme does have a bearing on their child overall.

Another way that parents/guardians cater for their child's learning needs is by providing them with **transportation to and fro school**. 130 respondents strongly agreed to catering for their child's transportation needs. 28 agreed while 10 were neutral in their response. 158 respondents in total did cater for their child's transportation needs. This is one of the means by which parents/guardians take ownership of their child's learning needs. They are not only limiting their assistance to the child to transportation but also **providing him/her with the school needs**, be it in any form. 87 respondents strongly agreed that they cater for their child's school needs and 81 said they just agreed. 100% parents/guardians mentioned that they provided for their child's school needs, be it of any type. This is one positive outcome and parents/guardian play a crucial role in supporting their child.



Graph 3.0 Ways of assisting child's literacy and Numeracy needs

Other than the questionnaire which comprised two parts, the researchers also collated information through in-depth semi-structured interviews with two MoE officials (n = 2), who were in favour of Circular 6. The first MoE Officer mentioned that: "Circular 6 serves as a tool to remind parents/guardians of their role in ensuring the child is fully supported by the parent in order to enhance the child's learning needs" (MoE Official interviewee, personal communication, 20 August 2017, Suva, Fiji). Similarly, the second MoE Official interviewed was also in support of the Fijian Ministry of Education's initiative to engage the parents in literacy achievement. The Officer shared that: "The initiative is a positive one and once parents/guardians realise its benefits, they will be fully supportive of their child's learning needs" (MoE Official interviewee, personal communication, 20 August 2017, Suva, Fiji). Having spoken at length with the MoE Officials, it was clear that they were in favour of the Circular and firmly believed that parents have an important role to play in their children's educational needs.

Summation

The findings from the survey unveil some valuable quantitative as well as qualitative insights into the introduction of Circular 6 in the school system. It also establishes the fact that the relationship between parental engagement and child performance is inherent in the context of children's learning needs. The field study conducted shows Circular 6 has positive impacts on a child's literacy and numeracy skills. In the long run, wherever parents/guardians are fully engaged in their child's learning needs, children seem to feel confident, and show heightened interest and later leading to thorough preparation for employability after successful completion of schooling. Involving parents and elders in a child's learning certainly proves fruitful as this would encourage students to further their interest or develop an interest in reading and writing. Being of the internet generation, children today need guidance and a lot of support to tap on their inborn skills and also assist with their short attention span. This can only be taken care of if parents and guardians actively and vigorously support the activities of the school.

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CHAPTER 9

INTERNET-BASED FATHER PSYCHO-EDUCATION PROGRAM

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Near East University

Introduction

There is a close relationship between the development levels of societies and their educational practices. Developed societies have aimed to increase their development levels by making significant investments in education and spreading education services throughout the country. The development levels of the countries, economic opportunities, the ratio of the school age population to the general population, the number of teachers, technological deficiencies and cultural attitudes towards education are factors that impact the ability of individuals to access services in the country. Education reform efforts have a universal outlook. All countries around the world are trying to reform their education systems either partially or completely. Nowadays, the potential of using the internet as a social resource is increasing (Rice, 2002). Distance education has an important function in the development of societies. Distance education is a new form of educational technology. The concepts and practices in this field are the result of a series of requirements for educational demand and developments in various communication-information technology and educational technology fields (Demiray, 2013). Distance education is a very good alternative, especially for people who cannot benefit from formal education due to time constraints, lack of space or resources (Baker, Sanders and Morawska, 2017). One of the outputs of the use of Internet technologies in distance education in terms of open pedagogy is the acquisition of the habit of self-learning. It is possible for individuals to develop their self-learning skills and gain new skills in this way by providing access to current information in a short time by using internet technologies in smart community development (Erturgut, 2008). For this reason, it is possible to reach parents in their homes, thus

allowing them to benefit from education and to develop themselves in parenting issues with the distance education system without time and space limitations. Today, parenting programs are generally conducted in a face-to-face manner. However, it is known that the participation of parents in parental education programs is not sufficient (Prinz and Sanders 2007, Sorakin, Çerkez and Altinay, 2019). Fathers often cannot participate in educational programs prepared for them due to busy working hours, lack of time, low motivation, transportation difficulties and fatigue (Sorakın and Çerkez, 2019; Spoth and Redmond, 2000; Prinz and Sanders, 2007). Internet-based interventions have the potential to eliminate many obstacles and parents' participation in these programs is thought to be easier (Baker, Sanders and Morawska, 2017).

With the distance education programs that will be prepared for parents, awareness will be raised among parents, parent-child relations will be strengthened, parents will become more self-confident and successful in their social lives,and this will contribute to the development of modern and smart individuals.

Early Childhood Stage and Parental Education

Early childhood is a significant period of time that affects every aspect of people's adulthood. In this period, children should be provided with optimal love, care and opportunities by their parents. The family is considered to be the smallest unit consisting of at least two people who are joined together by marriage, blood ties or adoption (Haviland, Prins, Walrath and McBride, 2006). Taking on the role of a parent, which begins when the child is conceived, is a condition that requires love, compassion, responsibility, knowledge, skills and sacrifice. When the scientific studies are examined, it is seen that the attitudes and behaviors exhibited by parents to their children are not innately acquired skills, and most of these behaviors are adopted later (Çağdaş and Seçer, 2005). After birth, the child's first close family is the family (Günalp, 2007). In other words, the family constitutes both the first and the most effective social environment of the child (Chow, 2004). From the moment the baby opens his/her eyes to the world, he/she begins to interact with his/her parents first and then with other individuals around him. The child develops based on the attitudes, behaviors and living conditions provided by his/her parents and takes her parents as a model (Dinçer, 2004; Özmert, 2006).

According to the Ecological System Theory, which explains child development, children develop in a system affected by the environment at different levels. Development continues as a result of the interaction between behaviors and traits inherited from the parents. According to Bronfenbrenner (1979), we should con-

sider the child in the context of the ecological systems in which it develops. This development process starts with the closest environment created by the home environment, continues with the wider environment such as the school system, and spreads to a wider environment including the home, school, social and cultural life of the child. It can be said that each layer is related to the others (Bronfenbrenner & Morris, 2006). The family plays a major role in the healthy development of the child's cognitive, physical, social, emotional and sexual developmental stages. As a result of the interaction between parents and their child, all development areas are affected (Taşkın, 2011).

With the help of the social environment in which the child grows, including the parents, the child gains positive and negative behavioral patterns. Skills are first acquired in the family and practiced in the family environment. The family supports the child's personality and social development process. In addition, the child's emotional needs such as love, compassion and respect are not only met in the family environment (Güneş, 2017). The child gains the most prominent features and attitudes and behaviors that he exhibits by taking his parents as a model. In the preschool period in particular, the interaction between children and their parents is very important for the development of children. The adoption of positive attitudes by the family in the preschool period covering the ages between 0 and 6 and raising their children consciously translates into permanent success in the school period. On the contrary, it is known that there are children who fail and have problems in their academic life. Children with personality and behavior disorders may experience adaptation problems when they start school. Senemoğlu (2004) emphasizes that the love and warmth to be shown to the child by his / her parents in the first years of life is important for the child to gain a basic sense of trust and that the personality development of the child is affected accordingly.

It is known that, besides the communication of parents with their children, their communication with each other has significant effects on the child. Relations between family members have a major impact on all stages of child development. It also affects children's world views. Children may develop negatively or positively depending on their family relationships and the healthy relationships they will establish in their future lives are also affected (Yörükoğlu, 2000). Violence and abuse against children can occur in homes where family members exert pressure, show a lack of respect, and inflict physical and psychological violence (Coocklin, 2001).

When the literature is examined, it is seen that children living with parents who are in constant conflict are more affected by stress, abuse and domestic violence, and they are more impacted by mental and physical health problems in both childhood and adulthood (Repetti, Taylor and Seman, 2002). Demir and Şendil,

2007). Accepting that the child is an infant and giving the message that the child is valuable are important in the positive self-development of children (Cüceloğlu, 2002). Parents need to respect and support the child's feelings and preferences in order to make the child feel accepted as an individual (Önder, 2003). In order for parents to express themselves effectively to the child, they must first be consistent and honest, communicate without judgment and allow the child to open themselves up at the right time. In addition, they must solve their problems with their children (McKay, Davis and Fanning, 2010).

Children whose parents intervene, criticize, underestimate and control their thoughts and behaviors do not trust themselves and have low-self-esteem (Clark and Shields, 1997). It was emphasized that parent-child communication is very effective in the adaptation of preschool children to the school environment and consequently the emotional state of the child is also important (Taşkın, 2011; Temel 2013; Ersan 2013)2016). Children are in a continuous process of learning and development. Children's mental health needs to be good for effective learning. Children whose parents accept their feelings and thoughts and are supported by their parents to express themselves clearly become self-respecting, sociable and able to establish good relations with others in their environment. The emotional aspects of children who feel safe include curiosity, a desire to learn and increased motivation, which accordingly facilitate mental processes (Sünbül, 2003). According to some studies, it is stated that parents who show positive behaviors to their children and who get positive results try to show more positive behaviors (Bater and Jordan, 2017; Graham and Weems, 2015). Exposure to negative experiences in early childhood may lead to disruptions in later developmental periods and cause problems in the psychological stability of the individual (Karaırmak, 2016).

Parents play a crucial role in the upbringing of individuals who are trying to adapt to the rapidly growing and changing society. As children are considered to receive their first education in the family, the importance of father and mother education is evident. Parental participation is very important for parents to contribute to the education of their children, as well as to their development and to be beneficial to them. Parental participation is the primary component of parenting (Ersan, 2013). Parental involvement involves the direct interaction of parents with their children. Parents' participation in joint activities with their children and their contribution to the education and development of children are defined as family participation (Erdoğan and Zelyurt, 2016). Parental involvement plays a central role, especially in early childhood. In this period, the development of children is very fast, but consists of critical periods. Parents' participation is very important for the social - emotional development of children and also for their

behavioral adjustment (Shonkoff and Phillips, 2000). The quality time that parents spend with their children is also very effective for the development of their children's imagination and creativity (Ünlü, 2010). Parents should raise, develop and strengthen their communication with the child. Parental education is especially important for the development of children who spend most of their time with their parents in the preschool period (Özel and Zelyurt, 2016). Early childhood, which covers the ages between 0 and 6, is one of the most critical periods of life in which personality is shaped, basic skills and many habits are gained, and children are the most open to all stimuli from the environment.

Studies have shown that babies are affected by the environment from the moment of birth and that it is important for adults to support them in order to develop in a positive direction and that children who grow up in positive environments have more opportunities to maximize their potential (Ural and Ramazan, 2007). In this period, comprehensive education should be given parents to provide the necessary environment for the healthy growth and development of their child. The good foundations and experiences laid in this period will have a positive effect on many aspects of the child's future life (Erdiller, 2010). Social, cognitive, emotional, personality and psycho-motor development of children of parents who are educated about mother and fatherhood skills are more advanced than children whose parents have not been educated (Kağıtcıbaşı, 1989; Duran, 2005; Oktay and Unutkan, 2003). In addition, Temel (2013) states that the parenting skills of the parents who are primarily responsible for the upbringing of children should be supported by family education programs. As a result of the education programs organized for parents, the communication between parents and children is more effective and the children's behaviors are affected positively. Thus, parents perceive their relationship with their children as less problematic (Şimşek, 2017).

Nowadays, the importance of the education prepared for parents has begun to be better understood and the opinion that families must be educated has emerged in order to ensure that children's personalities are developed in a healthy manner and to eliminate the behavioral problems seen in children. Based on the importance of parental education in educational institutions, it is emphasized that there has been an increase in educational programs for parents in order to enable families to communicate with their children consciously (Çağdaş and Seçer, 2005). It is seen that some of the patterns that imposed on women in the past have started to change with the development of societies and the introduction of women into business life. More recently, more emphasis has been placed on gender in family policies and gender equality is a growing topic(Hantrais, 2004). Accordingly, fathers are expected to show more responsibility and participation in child care

(Gürşimşek and Kefi, 2007). Child welfare studies aim to provide good living conditions for children. Child protection studies support that fathers should assume increased responsibility for their children's lives (Health Service Executive, 2011). In order to understand fathers, Lamb (2010) suggested that fathers from different countries and cultures should be examined. As in the rest of the world, in terms of children's development in Turkey, mothers are generally held responsible for education and caring for their children. The role and importance of the father in the child's life has not been addressed at all (Taşkın, 2011). The paternal identity, which starts when the husband learns that his wife is pregnant, is gained over a three-year period, plays an important role in the development of the child (Ergin and Özdilek, 2014). According to Tamis-LeMonda, Shannon, Cabrera, and Lamb (2004), the role of fathers is particularly important for two reasons. First, fathers contribute to their children's emotional, cognitive and language development. Secondly, fathers enhance children's mental health and general well-being by reducing the mothers' problems.

In recent years, in societies where the importance of mother and father activity in child development has increased, parent education has become more widespread. From the start of the 1960s to the 1980s, more systematic efforts were made to train parents. In the 1960s Dr. İhsan Şükrü Aksel organized informative meetings for parents (Yavuzer, 2003). Then, in 1982, with the aim of contributing to the early period of training, the Mother-Child Education Program (FACT) was developed. The aim of this program was to educate mothers with young children (Temel, 2013). Although the name of the program is Parent Education, Parents' School and Family Education Program, the participants of these programs are mostly mothers (Ünüvar, 2008). Fathers cannot participate in educational programs prepared for fathers due to extensive working hours, lack of time, low motivation, transportation problems and fatigue (Sorakın and Çerkez, 2019; Spoth and Redmond, 2000; Prinz and Sanders, 2007). It is thought that fathers can develop more sensitive relations with their children and enhance father - child interactions as a result of father psycho - education program.

Parents participating in family education programs have the opportunity to revise knowledge and skills that their children have learned at school at home. Thus, children's learning will be faster and more permanent (Oktay and Unutkan, 2003; Duran, 2005). Family education is of great importance for children in need of special education. Parents play an important role in the development of the potential of children with special needs (Sığırtmaç, 2011).

Family education programs contribute to the development of the child by enabling parents to acquire parenting, communication and learning skills (Warner

and Sower, 2005). Therefore, family participation should be ensured for the healthy development of the child in the preschool period and parents should be included in the family education processes (Özkan, 2014). Parents' education programs aim to develop parenting skills, to contribute to the learning environment of the child, to strengthen the family communication, to find solutions to the problems in the family and to contribute to all development areas of the child (Arnold, Zeljo and Doctoroff, 2008; Eryorulmaz, 1993).

Today, the function and importance of the father in the family and the impact on the child have started to be understood. In the past, fathers were people who did not express their feelings, brought money into the home, and were seen as authority figures. However, towards the middle of the 20th century, the changing role of women in society and their participation in business life, the increase in divorce rates, and the replacement of traditional families led to changes in the fatherhood role (Yeşilyaprak, 2003). Accordingly, fathers have been more involved in the process of raising their children (Abrams, 2002). In addition to academic skills, cognitive and language development, the psychosocial development of the children of fathers who have good communication with their children and contribute to their development and education is more positive. It is known that fathers who actively participate in the care of their children establish effective parent-child relationships and can cope with problems more easily (Gürşimşek, Kefi and Girgin, 2007).

In the first years of life, the relationship between children and their parents is critical. When parents divorce, children express considerable stress and anxiety. The child experiences a deterioration of the order they are accustomed to and they can no longer see their parents when they want (Furstenberg & Kiernan, 2001). As a result of the divorce of the parents, the child is forced to live with only one parent, generally the mother. However, it is very important that the father continues to interact with the child after the divorce and helps them adapt to their new life (Öngider, 2013). It is thought that the father psycho-education program will encourage fathers to take a more active role in the development of their children, to spend more quality time with them and to develop their fatherhood skills.

With the psycho - education program, it is thought that fathers can develop more sensitive relationships with their children and enhance their father - child interactions. From this point of view, the aim of the study is to strengthen and improve the father-child interaction through the prepared psycho-education program. The goal is to provide the fathers with knowledge about the developmental characteristics of their children, to help them to understand their children better, to develop a positive attitude towards their children, to help them to communi-

cate with their children and to allow them to gain the necessary information for parenting.

The Role of Paternity

The early years of childhood, where growth is the fastest, are very important for the physical, emotional, cognitive, personal and social development of the child. According to a literature review, intelligence, personality and social behavior emerge in these critical years (Koçak, 2004). It is known that in the early stages of childhood, the family has a significant responsibility to ensure the healthy development and socialization of the child. When the importance of the family is underlined, the first thing that comes to mind is the mother (Koçak, 2004). According to the traditional paternity role, it was believed that father brought discipline to his child, did not play with the child, and was responsible for earning money for the household (Feldman, 2000). Based on the traditional role, it was sufficient for the father to care for the child and to support the family's financial needs (Aydın, 2003). However, today, with the inclusion of women in working life and the increased adoption of gender equality, fathers have started to take a more active role in child rearing (Kocayörük and Sümer, 2009). The roles of men and women were affected by the changes and developments in economic, political and social fields. However, the concept of fatherhood has changed and the role of the father in child development has increased (Günalp, 2007).

Although Lamb (1975) stated that fathers are individuals who should not be forgotten in the lives of their children and have a significant impact on their development, many researchers started to investigate the interactions between fathers and their children and spouses in the late 1970s in particular (Day and Lamb, 2004). Subsequently, after the structure of father participation was defined in the early 1980s (Pleck, 2010), issues such as the extent to which fathers were involved in family affairs, whether there was division of labor between spouses in child care, father participation and relation to child findings began to be included in the agendas of researchers (Day and Lamb, 2004).

The literature focusing on father involvement has been growing rapidly over the last few decades in the context of rapidly changing family life and family structure, discourse on labor force participation and gender equality and division of labor (Cabrera, Fitzgerald, Bradley and Roggman, 2014; McWayne, Downer, Campos, and Harris, 2013; Lamb 2010). According to Lamb (2000), the concepts of father participation and father have been defined in different ways over time. The broad concept of father involvement involves the interaction and communication

between the child and the father, the attitude of the father towards the child, and the role, love and warmth of the father (Downer, Campos, Mcwayne and Gartner 2008).

The father factor has a positive effect on the holistic development of the child. The communication that the child establishes with his father is very important, especially in terms of personality development. It was observed that the children who received more interest and affection from their father were more adaptive, with improved leadership skills and increased abilities. The mother and father being harmonious and balanced with each other, and taking responsibility for meeting all the needs of the child, contributes to the child being a happy and peaceful person with himself and the world (Downer, Campos, Mcwayne and Gartner 2008). According to a study, the parenting functions are very similar for mothers and fathers and their effects on children are very similar (Cabrera, Fagan, Jay, Day, Michael, Lamb, and Natasha, 2014).

In recent years, although some studies have been conducted on fathers, more have focused on mother-child relationships and there are limited studies on the effect of fathers on child development (Beyazıt and Mağden, 2015). Parke, Dennis, Flyr, Morris, Leidy and Schofield (2005) stated that there are many factors affecting the participation of the father on the child and this concept can be understood better with a multi-factor approach. According to Cabrera, Fitzgerald, Bradley and Roggman (2014), the cultural and biological background, personal characteristics and parental attitude adopted by the father are the factors affecting father participation. In addition to variables such as culture, father's history and father's personal characteristics, some theories that have examined father participation with different models have emerged (Özgündüz, 2015). According to Belsky's (1984) model, the factors that affect parenting are the stories, psychological status, spousal relationships, professions and social relationships of parents in their own childhood.

When the previous studies are examined, Lamb (1979; 1997) stated that Father Participation typology is a model for studies conducted to determine the effects of father participation and fathers on child development (Kocayörük, 2009). According to the model developed by Lamb (1979), father participation has three dimensions. Firstly, the dimension called interaction refers to the time the father spends with the child. The accessibility dimension refers to the emotional and physical closeness between the father and child and responding to the needs of the child. Finally, the responsibility dimension is explained as undertaking tasks for the healthy development and happiness of the child. It reveals that a significant portion of the behaviors that the child gains as a result of the communica-

tion and interaction that the child has established with his parents in these years shapes their personality structure, attitudes, habits, beliefs and value judgments in adulthood (Kandır and Alpan, 2008; Yalçın, 2013). Lamb (1996) emphasizes that factors such as motivation, support, talent, profession and self-confidence are effective on father participation. Barnett and Baruch (1986) emphasized in their research that fathers with high involvement develop and become more resourceful about paternity. In addition, it is stated that there is an increase in the father participation of fathers encouraged and supported by mothers (Levy-Shiff and Israqelashvilli, 1988; McBride, Bost, Shin, Vaughn and Korth, 2005).

Cabrera et al. (2014) examined the different variables that prevented father participation in the model they developed. According to this model, differences in father's characteristics and life, family characteristics and upbringing, cultural background and paternity participation are affected. Cabrera and Fitzerald proposed a new model developed by Bradley and Rogmann (2014), which also considered ecological theory. According to this model, all systems (microsystem, mesosystem, exosystem, macrosystem and chronosystem) are affected by each other.

Importance of Father-Child Interaction

The mother and father continue to influence the child's life starting from the moment the baby is conceived. The important role played by the knowledge, skills and attitudes obtained as a result of the parent-child interaction in the first years of life during adulthood has started to be better understood today. It is known that as much as parents in the family, the father has an impact on the child (Yavuzer, 2003). and their social relations (Cabrera and Bradley, 2012; Kuzucu and Özdemir, 2013; Zeybekoğlu, 2013, Yogman, M. and Garfield, 2016; Kim, 2018). It is known that father's taking an active role in the family affects the cognitive development of boys in a positive way (Çağdaş, 2005). It is also emphasized that the child's language development, academic success and intelligence develop positively as a result of positive father-child interaction (Tezel and Özbey 2009). The father's interaction with the child is of great importance in the sexual development of their children (Pontes, 2009). It is an important factor in clarifying the concept of gender in boys and in shaping the interest in the opposite sex in girls (Pleck and Masciadrelli, 2004).

In some studies, it is stated that fathers with male children act as role models bringing masculine behaviors to their children and that the child learns masculine behaviors from his father (Çağdaş, 2002). In addition, positive communication established between parents strengthens the relationship between the mother and

the child. On the other hand, an unhealthy and weak relationship between the mother and father may cause the mother's attitude and behavior to the child to change negatively (Özdal and Aral, 2005).

The interaction between the child and his father in the first years of his life affects the cognitive functions of the child. The quality time the father spends with his child supports learning and intelligence (Bakınay, 2010). When the father has an attitude that supports and encourages the child to behave independently and to explore the environment, the child's intelligence development is positively affected. When father act as playmate to the child, speak, and read books, this impact the child's intelligence affects positively (Özensel, 2004).

According to many studies, the active participation of fathers in the child's life positively affects the academic achievement, intelligence, problem solving skills and language development of the child (Bakanay, 2001; Taşkın and Erkan 2009; Volling, Mahoney and Rauer, 2009; Sarkadi, Kristiansson, 2009). Oberklaid and Bremberg, 2007).

From the moment the baby opens his eyes to the world, his social and emotional development begins. Children learn to trust and share love with their fathers and socialize through their mothers. The child learns to share his mother with his father from the first moments of his life (Davidov and Grusec, 2006). With the father's involvement in the relationship that the baby has established with the mother, the social environment of the child's memory and other concepts are formed. Accordingly, the child begins to establish a social and emotional bond with his father. With the help of the involvement of father in the relationship with the child, the child can quickly learn to accept the society around them and other people by accepting the presence of others (Sarkadi, Kristiansson, Oberklaid and Bremberg 2007).

The first year of life is a particularly critical period in which the child gains a basic sense of trust. The confidence that the child gains in the first years of his life will be effective for the child's cognitive and social development in the future. Social and emotional development develops through communication and interaction between individuals. It is known that children who receive sufficient love and attention from their parents are more likely to learn and are more successful in developing positive self-perceptions (Özgündüz, 2015).

In order to develop a positive self-perception, a child must first be supported and accepted by his / her family and then by the environment in which he / she lives. Feedback from the father may have a constructive or destructive effect on the child's self-confidence development. A child who is accepted, supported, loved

and respected by her parents believes that she is valued and loved individual and develops a positive self-perception. The effect of fathers on the child's social and emotional development is very important. Fathers play a bridge in the child's relationship with the outside world. The father's approval allows the child to accept and admit the outside world (Ministeray, 2007).

Özgündüz (2015) stated that parental participation has a positive effect on children›s behaviors. Parents› participation is important in developing children's positive self-perceptions, enhancing their attitudes towards their social environment and schools, their motivation and desire, and their expectations about children and their future (Kefi and Girgin, 2007).

The development of sexual identity is a process that begins with the birth of the baby and continues until adulthood. The parents also play a social role in the development of the child's sexual identity. If the mother or father is not satisfied with their gender role, the child may have difficulty adopting this gender. For example, it can be said that the daughter of a mother who complains about the difficulties of being a woman and says that she would have preferred to come to the world as a man will not be satisfied with her feminine role. This is because sexual identity is a broad concept that includes sexual action but also includes the role of femininity and the role of masculinity (Yeşilyaprak, 2003).

When children reach the age of 3, they become aware of the separation of sexual roles. The Fathers play a very important role in the sexual role development of male children. The boy learns masculine behavior by imitating and observing his father. In this context, the absence of the father in the environment may adversely affect the sexual role development of the boy. In addition, the sons of fathers who are uninterested and make no contribution to child development spend most of their time with their mothers. Since the child is constantly with the mother, it may cause him to integrate with her over time and take the mother as a role model.

As in boys, the father plays an important role in the development of the sexual role of the girl. Boys learn masculine behavior by imitating and observing their father's behavior. However, the importance of the father is different for girls as the father is the first man they know. Therefore, the relationship established with the father determines the quality and shape of future relationships with the opposite sex (Bakanay, 2007; Dodson 2000; Saygılı and Çankırılı, 2003). It is known that girls who grow up with their father exhibit more feminine behaviors compared to girls who do not have a father (Çağdaş, 2002). According to gender role theorists, this situation shows that the different behaviors and attitudes of fathers to boys and girls are effective on their sexual role development (Poyraz, 2007).

On the other hand, psychoanalytic theorists have argued that girls are fond of fathers and boys are fond of mothers, and girls develop their gender roles by competing with mothers and boys by competing with fathers. In the opinion of social learning theorists, the father has a greater effect on the sexual role development of girls and boys than the mother (Çetin, 2006; Dodson 2000; Saygılı and Çankırılı, 2003).

The effect of the father on the child starts from the period when the baby is conceived. The influence of the father on the child's mental development, problem-solving skills, psychosocial and emotional development has been clearly demonstrated. When the development of children whose fathers are involved and the children who grow up without a father are examined, the effect of the father on the mental and socio-emotional development of the child can be clearly observed (Poyraz, 2007). There are many studies on infants in this regard. For example, the effect of the father on the social and emotional development of the baby was examined. Accordingly, it has been found that babies develop more socially and emotionally when they are not only securely attached to the mother but also to the father. In addition, when the child is attached to his/her father, it has been found to protect the mother from the harmful consequences of insecure attachment (Akende, 1999). The psycho-social adaptation of a child who maintains active communication and sharing with his father develops positively, the child develops more internally oriented control and shows more mature and independent behaviors (Bekman, 2005).

According to previous research, it is seen that positive father-child relationships are effective in the development of positive self-perceptions of preschool children together with the sense of communication and trust established by the father and the child from infancy (Davidov and Grusec). 2006; Ramirez-Valles, Zimmerman, and Juarez, 2002).

Development of Internet based Father Psycho Education Program

The preschool period is the most critical period in which children can maximize their potential and learn new information. In this period, h the development of children is very fast, the personality structure begins to take shape and the child gains basic habits (Yavuzer, 2003). In this period in particular, healthy relationships with mother and father affect the relationships that children have with their environment in the future. When it is thought that children are initially responsible for the education of their children , it is very important for the parents to develop themselves in terms of raising their children in early childhood.

The aim of family education programs is to support parents in the education and development of children, to learn the right attitudes and to help them establish the right communication with their children. Internet technologies, which have become increasingly influential on all aspects of our lives, have become an important factor in education as well as in economic and social life (Erturgut, 2008). As a result of the development of technology in the information age, it is thought that with the preparation of the internet-based Father Psycho-Education Program, education can be provided to deficient fathers on family education, family participation, father participation and the fatherhood role. Accordingly, the Father's Psycho-Education program will strengthen the communication between fathers and children aged between 3 and 6, increase the quality of the time they will spend with them, enable to learn the correct attitude towards their children, learn about the developmental periods and characteristics of their children, and be positive for their education.

In line with the above-mentioned information, it is recommended that an internet-based father psycho-education program should be designed for a period of 8 weeks. It is recommended that the father psycho-education program to be prepared should be Internet-based and video-supported. The program content should include the following topics.

Program Content

Objective: The aim of this study was to strengthen the father - child interaction.

Target Group: The target group of the study is fathers with children aged between 3 and 6.

Duration: The program consists 8 weekly sessions, each lasting 60 minutes.

Outcomes:

- Realizes the expectations of society, spouse, child and his own expectations as the father.

- Realizes how they can support their children in different areas of development (mental, physical, social and emotional).

- Realizes the influence of fathers on children.

- Defines the role of paternity.

- Understands communication barriers.

- Understands the effective communication can be provided by considering mutual needs.

- Learns ways to communicate effectively with the child.

- Recognizes emotions and knows and applies anger control / method.

- Learns the necessary skills to spend quality time with the child.

SESSION 1

Objective: 1. The aim of the session is to introduce the participants and the practitioner, to introduce the program, to inform about the aims and expectations, to learn how be a father and to give information about the role of fatherhood and to make practical applications.

SESSIONS II and III

Objective: To provide the participants with basic information about family attitudes and the developmental characteristics and family factor of 3-6-year-old children and to make them aware of the effects they can have on their child's emotional and social development.

SESSION IV

Objective: To provide awareness about children's rights and parental attitudes by focusing on child rights and parental behavior models within the 4th week of Father Psycho - Education program.

Sessions V and VI

Objective: To ensure that the fathers engage in effective communication with their children and are aware of the skills necessary for effective communication with their children.

SESSION VII

Objective: In the 7th week of the Father Psycho - Education program, the subjects of recognition and control of emotions are covered. to the aim is increase the awareness of the participant fathers about how they can define emotion and control their emotions.

SESSION VIII

Objective: In the 8th week of the Father Psycho - Education program, quality time and game subjects were covered. The aim is to make the fathers aware of the importance of spending quality time with their children and the importance of play for the child.

Conclusion

With the internet - based father psycho - education program for fathers, fathers who need support while raising their children and who want to develop themselves in terms of their raising children will be given educational support. The preschool period is of great importance as it defines the child's future life. It is thought that fathers who participate in father education programs and similar trainings can meet the developmental needs of their children. The healthy interaction between the father and the child in the preschool period will also lead to the development of healthier children and the formation of more qualified societies (Senemoğlu, 2008). The preschool period is the most critical years for the child's cognitive, physical, emotional, social and language development. In these years, family education is of great importance. It is known that parents who support the development and learning of their children in the family environment and who take various measures develop a more positive attitude towards the environment and school, and that both the academic achievement and individual development of children will increase (Kağıtçıbaşı, Sunar and Bekman, 2001).

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CHAPTER 10

OPEN EDUCATION RESOURCES A GATEWAY FOR ACCESSING HOSPITALITY AND TOURISM LEARNING MATERIALS

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Introduction

Information and communication technologies are the core tools for information gathering, social networking and knowledge transfer, which lead to changes in the higher education system. Internet is the most effective means of communication and studies by the global community today (Almobarraz, 2007). In the contemporary world, internet is the main tool utilized by civilized societies in higher education research and learning; technological trends are reshaping the pattern of learning and how the education system operates (Wiley, 2006).

OERs are emerging as a new development in the education sector. The program was first adopted at a forum of open courseware (OCW) for higher education in developing countries (UNESCO, 2002). OERs refers to any education material such as curriculum maps, course materials that has been designed for use in teaching and learning and openly available for use by educators and learners without any payment for their usage, royalties, passwords or license fees (Butcher , 2015). OERs usage and accessibility on internet is free without any technical, monetary or legal barriers. Users can learn from, create, adapt, reuse by acknowledging the original creator and by not adapting the resources for profit (Hylen, 2006).

Users can also freely produce print version of the resources such as learning modules, journals, learning objectives and collections. OERs are increasingly being used in higher education due to their openness and the capacity to remove demographic, economic, and geographic educational boundaries and the promotion of access to learning materials globally (Sheila & Wilbert, 2008).

OERs has some limitations despite the numerous advantages in their adoption in learning; This is because, they are new discoveries to most of educators and learners. Grodecka and Stiwowski, (2004). The call for research to identify the factors leading to the slow or lack of awareness and utilisation of OERs has shown the need to create awareness in order to reach the desired target and the education community (Torres, 2013). OERs has influenced and brought positive changes into higher education in China, even though there are limited literatures on OER utilisation from learners in higher education (Jessica et al 2015).

Awareness is one of the factors that can influence the use of any resources and without the knowledge of the existence of the OERs, learners night not be able to use them for learning. Access and availability of internet facility with low cost of connectivity is a key to accessibility of OERs and the readiness of learners to use OERs becomes only possible if they are aware of its existence and have the capabilities and skills in information and communication technologies; learners are expected to be oriented and trained on accessibility, choice of qualitative OERs, and how to find the resources on the internet. One of the required capabilities for learners to use OERs is the availability of computers, skills acquisition and resources (Mays, 2014).

Low cost of education, qualitative learning materials and motivating learners are the priorities of every education system; learners do encounter a lot of academic difficulties as a result of cost of learning materials, but with the emergence of internet facilities and information communication technologies, the education system is experiencing some changes globally (UNESCO, 2015a)

In a research conducted in Canada, it was established that, textbooks are very expensive and unaffordable to learners, which led to learners shifting to digital learning resources that are accessible at no cost (Coffin, 2012). A learner that utilizes OERs saves a lot of education costs and which impacted on their learning outcomes Reiger et al, 2017.

Research indicates that utilisation of OERs encourage innovation, creativity and improve learners performance, utilisation of OERs enable learners the opportunity to explore internet facilities and support innovation (Butcher et al 2012). Change is a process that requires effective communication, ability to adapt, com-

mitment, support and team work (kezar, 2013) Law makers in Canada are becoming aware of the supportive potentials of OERs in reducing cost of education (Mcgreal et al, 2015).

Open Education Resources

Refers to any open learning resources that can be utilized for learning, teaching or research. These resources include course reading, textbooks and other contents such as games, videos, applications, syllabi, quizzes and other assessment tools or material which can be used for learning and teaching. OERs are electronic materials which include multimedia formats, which are pasted under a creative commons or other licenses that are open or fairly accessible. OERs are produced by higher education institutions, libraries, organisations, government agencies and other bodies that support and promote knowledge sharing.

Usage of Open Education Resources

OERs are technological digital resources which focus online learning materials; these materials are used under licenses that allow its utilisation. Some OERs can be modified while others are only used in their original format; they are found in repositories and could be from an institution or a collection of materials from departments of different institutions. Learners and researchers can download these materials and utilize them in a formal or informal learning situations and activities, thus, OERs are easy to manipulate with the trends in technology in different academic perspectives and approaches.

Producers of Open Education Resources

Open Course Ware project which began in 2012 was the beginning and initiation of OERs from MIT. These initiatives has been adopted by higher education institutions globally which allow course materials to be accessible to learners and researchers and they can take advantage to adopt these materials for their learning and research, this gave way for learners and researchers to improve and excel through OERs.

Significance of Open Education Resources

OERs are open and free to all and can be assessed and improved by the education community globally, it has the potentials to encourage creativity and innova-

tion in the education community globally, giving way to development of alternatives to improvement and effective learning situations. OERs support learners and researchers in different context and in different perspectives in learning and research with low or no cost. Information and communication technologies are the main tools that promote the spread of OERs into different formats and different channels of distribution.

Challenges of Open Education Resources

Credibility and reliability of OERs depends on their sources, some can be evaluated through feedback channels while, others cannot be evaluated and this affects the quality of the materials. Educational materials are subject to reviews and update and most of the OERs are not updated to the new trends, even the institutions that produce the materials are not held to the same standard of quality.

Implications of OERs for teaching and learning

OERs movement will lead to having all components of education to be available online in the near future for learners and researchers and this will later affects the standards of "degree certification" as a result of the growing open content, many sub-standard learning centres will emerge to replace the traditional education system.in another perspectives OERs will increase the access to learning materials to students and other non-traditional learners. OERs are solutions to the rising costs of education globally and they have the potentials to bring changes in learning and teaching, giving way to institutions and learners the ability to choose from available materials they want to use and assemble in different perspectives and context.(David W, 2010)

Conclusion

Tourism is a sector where intense competition is experienced and demand changes direction easily. The number of travelers increasing day by day also increases the competition in the sector. It is also a labor intensive sector. The competence and education level of the personnel providing service in the tourism industry is also important. The staff working in tourism establishments communicate directly with the guests. Therefore, the staff providing the service requires a high level of knowledge and experience.

Providing the highest benefit from the tourism industry is possible with an effective and quality tourism education system. At this point, different educa-

tion methods emerge for both tourism industry employees and students who are trained in this field. Distance education and related open education resources are separated from traditional education methods, allowing for more personalized education opportunities. Additionally, open teaching resources provide students with the ability to move away from crowded classrooms and focus on technology. In the tourism industry, where the education, knowledge and experience of the employees are very important, with open education resources, the employees can continue their lifelong learning by keeping their knowledge up-to-date.

The education system, in which written and printed sources are effective, has started to change to a great extent with the transfer of information and knowledge sources to electronic media with open education resources. Open teaching resources make the interactive and self-learning process even more active. The most important tools to support this process both in formal education and in lifelong learning are open education resources and other online education resources.

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CHAPTER 11

PROFESSIONAL DEVELOPMENT OF THE PEOPLE WITH DISABILITIES WITH DISTANCE EDUCATION

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Concept and Definition of Disability

The concept of disability has different definitions made in different periods. If we look at a few of these definitions; According to Heiden, the concept of disability is the social disadvantage caused by the losses as a result of damages in body functions (Demircioğlu, 2011). The concept of disability is the occurrence of deficiencies in individuals and these deficiencies lead to limitations in person movements (Sarı, 1992). According to the World Health Organization (WHO) Law No. 5378 on the Handicapped, the word "handicapped;; suffered losses and deficiencies in physical, mental, spiritual and sensory abilities; It is defined as people who cannot participate in social and working life under the same conditions as the rest of the society (WHO, 2002). In the United Nations Universal Declaration of Human Rights, disability is defined as for people who cannot perform the work that a normal person has to do in his / her personal or social life, as a result of hereditary or subsequent deficiencies in his physical or mental abilities (Demircioğlu, 2011). According to TDK, the obstacle is the reason that prevents something from happening; The concept of disability is defined as deficient or defective in the body (TDK). Although the concept of disability is expressed differently over time (disability, special, disabled, etc.), it is an expression of uncertainty (Çaha, 2016). The disability of the individual's physical and mental functions and their lack of mobility, attitude and behavior makes it different from other members of the society.

This difference is seen as the cause of the uncertainty and discrimination experienced by disabled people. The basis of discrimination is to have unusual features (Engelsiz Yaşam Derneği, 2017).

Although different definitions are being mentioned in literature, people with disabilities can be defined as individuals who have difficulty adapting to social life due to various degrees of physical, mental, psychological, sensory or social loss and need support services such as protection, care and rehabilitation. (WHO,2012)

The definition of disability may vary according to cultural and social differences. In order to establish a conceptual standard against this international problem, the World Health Organization has made a classification (Demir, 2000). According to this classification; lack of health, physical, physiological, psychological function or structure and abnormalities; loss or loss of any ability compared to a normal person due to disability; Inability to provide normal activities according to age, social and cultural and gender status is defined as disability (Şahan, 2018).

There can be many different causes of disability. These reasons can be grouped under two headings in general. One of them is the prenatal causes of genetic disorders caused by parents. the other, after birth, may occur due to different factors such as accident, pillow, febrile disease, hormonal disorder (Akardere, 2005).

Today, different types of disabilities have emerged with the increasing number of disabled people due to population development. It is possible to collect these types of obstacles under 4 headings. These are (Aruk, 2008):

1) Physical Barriers: Mobility disorders and Respiratory disorders

2) Sensory Barriers: Visual disorders and Hearing disorders

3) Mental Barriers: Emotional disorders and Social disorders

4) Obstacles to comprehension / perception: Learning Disorders and Attention shortages / deficiencies

According to OECD data-EU and Turkey, about 15% of the world population is composed of people with disabilities. So, there are 1 billion disabled people in the world. For this reason, the group of individuals with disabilities is considered the largest minority in the world. According to the Turkey National Disability Database number of people with disabilities make up 13% of the population. Of these, 27% are 0-21 years old, 36% are 22-49 years old, 37% are 50-64 years old. In the European Union, 44 million people with disabilities who have basic efficacy problems between the ages of 15-64 and 35 million people with disabilities have limited working opportunities due to a lifelong health problem (Ey-der, 2019).

When North Cyprus data is evaluated, according to the records, the number of citizens with disability is 275 people. When we look at the regional distribution of these citizens, it is revealed that 28% of disabled citizens live in Nicosia, 25% in Famagusta, 19% in Güzelyurt, 13% in Iskele and 12% in Lefke and 3% in Karpaz. When the distribution of disabled citizens living in the TRNC by gender is examined, it is seen that 54.65% of disabled citizens are male and 45.35% are female. 86.5% of the disabled individuals are adults and 13.5% are children (Altınay & Altınay, 2019).

When TRNC citizens are divided according to the type of disability, it is seen that 45.5% of them have Orthopedics, 36.1% have Mind, 10.1% have language and hearing, 4.7% See and 3.6% have different disabilities (Altınay & Altınay,2019).

Education of People with Disabilities

Education is the process of intentional and desired behavior change in an individual's life. However, unfortunately, this process does not work systematically for people with disabilities as in other individuals. Although education is a very important factor in the survival of people with disabilities, it is mostly underestimated. As a result of insufficient education provided to individuals with disabilities, they experience difficulties in social life, difficulties in economic issues, regression in social status and starting professional life as well as making career choices. However, in order to reach the welfare level of people, they must go through formal intensive education in schools or training centers and acquire qualifications and obtain professional titles (Ey-der, 2019).

On the other hand, problems are being faced in providing education in formal and non-formal education institutions for people with disabilities because of shortages of training materials, lack of experienced personnel and lack of suitable environments. Special education centers for disabled people do not fully meet their vision of education and development. Due to these difficulties, information-assisted education methods on the education and development of people with disabilities are supported and used in many countries. The "distance education" model was first introduced in the United States by giving stenography courses through correspondence, and technology-assisted distance education studies were first introduced by the University of Wisconsin in 1906. The advent of distance education applications in Turkey, was realized with the Open University. The concept of distance education, which was found to be useful for reaching large masses over time, has become a concept used both in formal and open education systems

and considered as an alternative to today's disability education (Engelsiz Yaşam Derneği, 2017).

The Concept of Professional Development and Professional Development of Individuals with Disabilities

The fact that individuals continue to develop themselves in their occupational fields after having a profession is explained by the concept of professional development ((Özgül, 2018). Professional development is a concept that encompasses all activities that emerge through the interaction of the concepts of personnel training, human resources management and career planning (Elçiçek, 2016). Professional development is not only learning new information that emerges in professional life, but also self-renewal of an individual (Genç & Aydın, 2015).

Although there are laws regarding the recruitment of disabled people to work life and employment within the governmental framework, the lack of routine practices to support people with disabilities in vocational development after the first employment is the biggest problem experienced by disabled individuals to benefit from vocational development opportunities. Individuals who are not adequately supported in terms of vocational training and rehabilitation; do not gain qualification, have problems about being literate, are inadequate in carrying qualifications suitable for professional qualifications (Hasırcıoğlu, 2006).

In addition to the lack of adequate professional development courses for individuals with disability, the scarcity of individuals with qualifications to provide disabled education is seen as a problem for the professional development (Şahan, 2018). In order to support people with disabilities in their professional development, individuals with enough qualifications should be used as educators and distance education applications and information technologies should be used in order to enable people with disabilities to access developmental trainings easily.

The People with Disabilities in Educational Systems

In this context, it can be assumed that the adaptation to social life will increase when the difficulties faced by disabled people in daily life are determined and their special needs are met; as well as and the services and equal access

At this point, it can be stated that each disabled group may have different needs. Considering the difficulties, they face in classical education systems, it should be aimed for disabled people to be educated without being dependent on others, to become self-sufficient and to integrate with the society. This concept of

activities aimed at acquiring independent life skills in educational settings should serve to achieve these goals. Although the studies on this subject have gained momentum in recent years, it is known that full and effective participation of disabled people in education cannot be ensured and even they are discriminated against. The important point is to provide education in formal and non-formal education institutions in accordance with both the education of disabled students and the professional development of adults with disabilities.

Generally, shortage of educational materials, lack of experienced personnel and lack of suitable environments can be observed. Special education centers for disabled people do not fully meet their vision of education and development. In this respect, distance education for disabled people can be offered as a solution within the framework of professional development.

Looking at the mentioned distance education concept it can be defined as a rational, contemporary and innovative education system that lives rapidly in computer environment which is completely independent of time and space without the obligation of the student and teacher to come to school through information technologies in a virtual environment. In this respect, live, video, audio and audio-visual courses are taught, and the participants can watch them whenever they want, and can monitor.

As mentioned earlier, distance education model was first started by giving stenography lessons with correspondence in US. On the other hand, the advent of distance education applications in Turkey, was realized with the Open University. Over time, the concept of distance education which is useful for reaching large masses, has also been used in both formal and open education systems and is considered as an alternative to today's disability education.

With distance education, service can be provided to people with disabilities at all levels and ages with an open education approach. Today, in developed countries such as Australia, USA and the UK, distance education applications are used for the education and professional development of disabled people and arrangements they need are established. Considering the basics of realization of the stated social life situations, it can be emphasized that two of the prominent factors are education and professional development.

In terms of global education systems, children with disabilities are less likely to start school than their non-disabled peers, and children with disabilities have lower school attendance and lower-class attendance rates. There are differences in completing education across all age groups in both low-income and high-income countries. However, these differences are more pronounced in poor countries.

Differences in the participation rate of children with disabilities and children with disabilities in primary education can vary from 10% in India to 60% in Indonesia. The difference in participation in secondary education varies from 15% in Cambodia to 58% in Indonesia (Gujarat, UNNATI and Handicap International, 2008).). Even in countries with high enrollment rates, such as Eastern European countries, many children with disabilities do not attend school.

Involving children with disabilities requires changes to the system and schools. The success of inclusive education systems largely depends on a country's determination to enforce the required laws; formulate policies with clear objectives; develop a national action plan; infrastructure and capacity for implementation and long-term financing. Ensuring that children with disabilities have equal educational standards with their peers often requires an increase in the budget allocated to education. Creating an inclusive learning environment will help all children learn and realize their potential. In the curriculum, teaching methods and tools, examination, assessment and assessment systems, student-centered approaches should be adopted, and education systems should be transformed (Development for all: Australian assistance program 2009–2014. Canberra, Australian Agency for International Development, 2008a.)

In this context, anti-discrimination laws can be a starting point to encourage the inclusion of people with disabilities when the scope of education is examined in terms of the professional development. Employers are required by law to make reasonable arrangements. Arrangements such as making recruitment and selection procedures accessible, changing working conditions, adjusting working hours and providing assistive technologies can reduce discrimination in working life, increase access to the workplace, and transform perceptions of the capacity of people with disabilities to be productive (Jesperson, 2007). In addition to the inclusion of people with disabilities in vocational education institutions, the provision of other conditions such as peer education, guidance and early intervention show promise for improving the skills of people with disabilities. Community-based rehabilitation can also improve skills and attitudes, support in-service training, and guide employers. The fact that people with disabilities undertake the task of supervising the work life of their organizations has encouraged vocational training and employment in some countries (Bines, 2007).

The Importance of Distance Education for the People with Disabilities

As detailed above, distance education approach can offer solutions for the problems faced by disabled people in the context of classical education approach. Various definitions are made for the concept of distance education. Although the expressions are different, the definitions have the same meaning. Some definitions are as follows: It is a form of education in which students and lecturers are in different geographical locations and the transfer and interaction of course materials are realized by using technology. In the European Union Distance Education action plan, distance education system is defined as the access to resources, exchange of information and cooperation by using internet and multimedia technologies in order to increase the quality of education activities (Yalçınkaya, 2006) Also, California Distance Learning Project (CDLP) defines distance education as follows: : Distance education program is a system that makes education by connecting students and educational resources (Hom, 1994).

Distance education is a model that differs from the standard education models in terms of its implementation. It is an educational activity where students, teachers and educational tools in different places are brought together through communication technologies. The most significant difference between distance education and classical education is that individuals can complete their education (primary, secondary, associate, undergraduate, graduate, doctorate and professional development courses) without leaving their jobs and private lives. Distance education, in the most basic sense, is a requirement that occurs when a teacher and learner are separated at a physical distance from the face to face (World Bank, 2001).

As stated before, technologies such as audio, video, computer data, and published publications, which replace traditional education, are the link between distance education and traditional education. Training programs in this way offer new educational opportunities to adults in addition to the training they receive. For the concepts of time, distance or disability, this system means the opportunity to increase knowledge and continue education in work-home environment (Hom, 1994).

Development of Vocational Training with Distance Learning in Turkey for People with Disabilities

Today, the importance given to the education of people with disabilities is increasing. It is the most natural rights of people with disabilities to survive without needing anyone in all areas of life like any human being. In this context, it is necessary to organize and disseminate appropriate educational environments, to benefit from inclusion education and to be gained to society through vocational education (Genç & Aydın, 2015).

In this context, the Republic of Turkey Labor and education and vocational training social security ministry in accordance with the strategic plan created under a special policy to increase the participation of disabled people in the workforce. Employability, vocational rehabilitation, grant support to establish their own business, and professional consulting services are being developed. In this context, the Republic of Turkey as well as Labor and Social Security Ministry of TEO Ministry of Education aims to provide with the work of institutions like the Ministry of Finance. It is emphasized that İŞKUR will provide job and vocational counseling services to the unemployed people with disabilities by identifying their situation one by one and providing them with better vocational training and increasing their employability. It is reported that new approaches will be introduced to enable disabled people to participate in education and working life without discrimination. At this point, distance education programs will be developed for the education of disabled people and it is aimed to provide trainings. In line with this aim, their qualifications will be increased through distance education programs in order to enable people with disabilities to be occupied, and access to education will be facilitated through distance education programs that will be developed specifically for disabled people (UIS, 2017).

At this point, it is not usual for disabled people to participate in working life in our society. This is because employers believe that they will encounter some problems when they employ disabled citizens (Meşhur, 2016).

Some of these issues include:

- Workers with disabilities often get excuse leave and get sick
- They cannot work efficiently and well,
- They are sensible. They become feisty, brittle, and fry quickly
- Disturb other employees and reduce overall work tempo
- They are more exposed to work accidents

- They constitute a negative landscape in terms of public relations
- It is expensive to make special arrangements in the workplace
- It is more difficult to dismiss and apply criminal sanctions
- There are enough unemployed people in the labor market

In this context, entering with disabilities in the labor market in Turkey can be realized in different ways. The prominent practices in this direction are the implementation of the quota system, which is a legal obligation, the application of a protected workplace, the cooperative mode of individual work and working from home practices (TİK, 2016).

When considering these practices, the number of Open and Remote trainings given to disabled people as a result of strategic planning increases. One of the best examples in this context is ISMEK, the lifelong learning center of Istanbul Municipality. At this point, it provides special education services in order to increase citizens' self-confidence, adapt to society more easily, socialize and acquire a profession. Starting from the fact that disabled people who have physical and psychological problems can solve their problems much more easily by participating in production within their own means, İSMEK organizes free courses with private centers and trainers. Experts state at the workshops that "To have an occupation can also be considered as rehabilitation and have significant benefits to involve the people with disabilities in work force." (ISMEK, 2019).

The mentioned trainings are carried out under the supervision of expert trainers with the application of special education curriculum, course material, specially developed programs and techniques in order to provide an efficient education in the field they want to study in an environment suitable for the arts and vocational education, obstacles and features. Individuals with disabilities are trained in computer management, computerized accounting, English and jewelry design. Computer trainings are provided by expert instructors with the support of computers with different programs and equipment for the visually impaired and for the hearing impaired. At the same time, hearing impaired students communicate with each other by using hand gestures and facial gestures. Literacy training is provided for orthopedic disabled people who have not been educated in any school because of their disabilities. In the centers open to all disabled people except the mentally disabled, the most demanded branches are reported in English and computer. Disabled trainees studying at ISMEK are entitled to receive the certificate of the branch they are successful in at the end of the training period (ISMEK, 2019).

In this context, the necessity of new policies is seen clearly when the opportunities of distance education in disabled employment are examined. Clearly the development of distance education programs would lead to professional and personal development for those individuals with disabilities.

Global Practices on Vocational Development of the Disabled with Distance Education:

At this point, a few successful examples stand out when we look at foreign applications. For example, in UAE (United Arab Emirates), there have been big efforts to include people of determination in the mainstream educational settings. Ministry of Education provides expert teachers who specialize in dealing with children of determination. In 2008, Ministry of Community Development launched an initiative to integrate people of determination in the government education system. The initiative which was launched under the slogan 'School of All' and adopted by Ministry of Education was a major step towards the social integration of the disabled and their involvement in the development process. Dozens of disabled people continued their education, many of whom have graduated from higher education and some received their PhDs. The National Project for Inclusion of People with Special Needs which was launched in 2008 under the slogan 'Our Life is in Our Integration', emphasizes on providing the necessary environment and facilities for people of determination in order to facilitate their practical access to the educational system.

Another example in this context is Estonia, which has an increasing success in the field of education. The principle that adults including adults with disabilities should be able to attend the learning sites that are situated near their homes has gained most support. And towards this goal actions have been taken. In the academic year 2004/2005 there were already 33 comprehensive schools in Estonia where adults could learn in evening classes or by distance education, including the possibility to graduate. The same model has been taken over by vocational schools. In 2004 about 800 people with disabilities were studying in vocational schools. This development is also supported by the law of vocational education (1998) where it is stressed out that people with disabilities should be included to normal study groups and only students with severe or multiple disabilities should be studied in small groups (Nvl,2019).

At this point, the case of Finland, which is one of the most successful countries in the field of education, is also examined. Supporting distance vocational special education using ICT for students with disabilities in Finland Luovi Vocational

College operates nationwide in Finland, in 24 locations. It provides vocational education and training for students with special needs. The location of this initiative is the Luovi unit in Liperi, near Joensuu city in eastern Finland. The project aims to develop e-learning for Luovi College students using ICT based Individual communication environments and possibilities, as well as develop learning materials, student assessment and criteria for vocational training. The activities are a part of an ESF project called 'Developing integration, equal opportunities and participation of people with severe disability (VAVA II)' and involves 10 staff members, students with severe disabilities as well as project partners in Eastern Finland. It has been recognized that vocational training has not been able to reach all potential students in Eastern Finland. Journeys from home to colleges can be long and all vocational colleges cannot offer accommodation services. Some of the potential students also need new ways of learning since they cannot benefit from traditional teaching methods. As a response to this, specialist ICTs for e-learning have been applied (European Agency, 2019). The system allowed people with disabilities to search for educational/re-qualification programs accessible to them depending on their disability and then access relevant distance learning courses using in order to obtain state recognized qualifications. It also allowed them to search the database of perspective vacancies in order to obtain professional employment (Australian Agency, 2008).

The provision of electronic information services on educational opportunities for people with disabilities has clear potential for development. However, there is a need for great co-ordination between policy and service sectors in order to reduce the split of policy responsibility for ICT in education for people with disabilities. This situation requires a policy response guided by the principle that all learners should have an entitlement to be involved in all assessment and examination procedures. ICT can be an invaluable tool in making assessment procedures accessible for all learners, including those with disabilities (European Agency, 2019).

Development Areas and Further Study Needs

Looking at the mentioned distance education concept it can be defined as a rational, contemporary and innovative education system that lives rapidly in computer environment which is completely independent of time and space without the obligation of the student and teacher to come to school through information technologies in a virtual environment. In this respect, at this point, it can be stated that each disabled group may have different needs. Considering the difficulties, they face in classical education systems, it should be aimed for disabled people

to be educated without being dependent on others, to become self-sufficient and to integrate with the society. This concept of activities aimed at acquiring independent life skills in educational settings should serve to achieve these goals. Although the studies on this subject have gained momentum in recent years, it is known that full and effective participation of disabled people in education cannot be ensured and even they are discriminated against. The important point is to provide education in formal and non-formal education institutions in accordance with both the education of disabled students and the professional development of adults with disabilities. Generally, shortage of educational materials, lack of experienced personnel and lack of suitable environments can be observed. Special education centers for disabled people do not fully meet their vision of education and development. In this respect, distance education for disabled people can be offered as a solution within the framework of professional development (Karaatmaca, Altinay& Altinay, 2019).

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CHAPTER 12

ENTREPRENEURIAL LEADERSHIP IN EDUCATION 4.0

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Abstract

In these days of the Industry 4.0 era, new communities strive to seize changing social, environmental and economic opportunities. It is observed that educational institutions, one of the main areas affected by Industry 4.0, have switched to education 4.0 processes. Education 4.0 is expressed as a new experience-based education system that utilizes technology and meets the expectations of today's world within the framework of a personalized education system, as opposed to memorization-oriented education systems. In this rapid change process due to technological conditions, industry-leading entrepreneurial leaders are needed to manage the new education process in industry 4.0. Having an understanding of entrepreneurship and innovation is considered critical for change. At this point, the main purpose of this research has been determined as revealing the importance of entrepreneurial leadership, which is believed to be an acceptable type of leadership for educational managers. This research is a compilation study based on scanning of previous researches. It turns out that the effects of Industry 4.0 on the field of education management are positive and entrepreneurial leadership is important as a type of leadership that managers must adopt.

1. Introduction

Leadership is an ancient concept that emerged with the formation of human communities. It has been the subject of science since the early 1920s and several different definitions have been made. It is observed that more than 350 leadership and leader definitions emerged in the 20thcentury alone (Erçetin, 2000). Based on

the common expressions in the literature, it can be defined as achieving the goals determined with the establishment of the leadership organization and mobilizing the employees in the organization in this process (Çelik & Şimşek, 2014). In other words, leadership can be expressed as the process of influencing the activities of a person or a group to achieve a goal in a given situation (Hersey et al., 2008). In other words, Leadership is defined as 'the process of influencing others on what to do and how to do it effectively and the process of concentrating individual, collective efforts to a goal'. (Yukl & Chavez2002),

The concept of leadership is first described according to the theory of characteristics. This theory is based on some of the leader's inherent personal characteristics (Ertürk, 2016). These features include ability to succeed, willingness to manage, persistence, self-confidence and superior comprehension (Brestrich, 2000). Researchers, who argue that there are shortcomings of the theory of characteristics, have put forward the theory of behavior as a reaction to this theory. Advocates of the theory of behavior emphasize that the acquisition of these behaviors can be achieved through education by determining the behaviors that should be exhibited in order to be an effective leader and influence their subordinates (Keçecioğlu, 1998).

However, the fact that different leadership approaches may need to be exhibited in both theories depending on the changing time and situation is ignored. For this reason, the contingency theory has begun to be studied. According to this theory, it is claimed that there is no single leadership type that applies to all situations, and different leadership approaches should be adopted according to changing situations (Kılıç, 2003). Contingency leadership is displayed on the basis of the employees' talents, expectations and needs, characteristics of the organization, past experiences, expectations of followers, and characteristics of the leader personality (Koçel, 2005). Today, it is assumed that the pioneering leadership theory adopted which has paved the way for modern leadership approaches is the contingency leadership theory.

The acceleration of access to information and the experiencing of industry 4.0 age with the technological developments in the 21stcentury results in the emergence of various modern leadership approaches (Yılmaz, 2014). Transformational leadership, visionary leadership and technology leadership stand out first among the leadership types put forward according to the contemporary leadership approach.

When the historical process is analyzed, it is observed that various leadership approaches, which are influenced by cultural differences, appear in each period

according to the situation, time and conditions. However, it is seen that change occurs only in the scope, characteristics and perception of the concept of leadership (Hodgetts & Luthans, 2003).

Societies are constantly changing and improving. Depending on the changing environmental conditions and new opportunities, the leadership style and behaviors that are valid today lose their popularity tomorrow, and new leadership understandings may emerge (Eren, 1998). What is expected of leaders today is that they evaluate new opportunities for society, make the changes needed by the society, capture the industry in the 4.0 era, and be innovative, brave and assertive, that is, have entrepreneurial characteristics. Entrepreneurs are those who see opportunities that other people cannot see, turn them into business ideas, direct them to production, and provide new outputs that create added value for society (Yıldırım, 2013). Entrepreneurs are also leaders because they are the people who set up, develop and manage a business (Vatansever, 2011).

It is believed that the new type of leadership emerging in order to survive in an increasingly competitive environment will be entrepreneurial leadership. In the broadest sense, entrepreneurial leadership is defined as increasing the performance of group members in order to see and capture opportunities in reaching the organizational goals (Renko et all., 2015).

Organizations and leaders who have entrepreneurship features are needed to meet the needs of society, to compete and hold in the sector in this era labeled as "industry 4.0 age" where health, law, economy and education organizations are characterized by a high level of technological development.

The fact that educational institutions show entrepreneurial characteristics and that the entrepreneurial spirit is dominant in schools should not be considered apart from the necessity that their manager should have entrepreneurial leadership characteristics (Yazıcı, 2014).

It is seen that the researches on entrepreneurial manager and leadership in the age of Industry 4.0 are mostly among companies with commercial concerns. The reason for this may be due to the fact that this concept is mostly of interest to profit-making organizations, factories and businesses.

Making use of the few resources written on the entrepreneurship of the administrators for the field of education reflection of the entrepreneurship characteristics of the school administrators to the school, entrepreneurial competence levels of school administrators as an effective leadership type, entrepreneurship skills and school manager entrepreneurship scale development, it is planned to examine education 4.0 model introduced in the industry 4.0 era and the entre-

preneurial leadership that is believed to support it in detail (Bayrak & Terzi, 2004; Lynch, 2012; Yazıcı, 2014; Çelik, 2013; Köybaşı & Dönmez, 2017).

Today, as in many fields, severalstudies are conducted in the field of education management, and the findings obtained from the studies shape the theoretical and practical foundations of education management (Çelik, 2000). From this point of view, with this study, the concepts of education 4.0 and entrepreneurial leadership in industry 4.0 will be explained in connection to each other.

2. Method

This study is a conceptual review study. Compilation and (literature) review articles are manuscripts that scan a sufficient number of scientific articles, summarize the subject at the current level of knowledge and technology, and evaluate and interpret the findings by comparing them. Together with all the developments in basic and applied science, the techniques and practices in the latest scientific studies are evaluated (Herdman, 2006).

3. From Industry 4.0 To Education 4.0

With the concept of Industry 4.0, there is a rapid digital transformation in societies (Öztemel, 2019). Industry 4.0 is known as the fourth industrial revolution. It provides critical changes in various areas. The widespread use of the Internet and the related technology usage areas are among its main effects (Bulut & Akçacı, 2017). Industry 4.0 is defined as the activation of any living or non-living thing with economic value in the fields of artificial intelligence, three-dimensional printers, robotics and space technology (Yılmaz & Genç, 2019).

Industry 4.0 is basically a transformation process that combines information technologies and industrial processes. The education of manpower that will design, develop, produce and use the technology in every field according to the requirements of the Industry 4.0 era is an inevitable reality. In order to achieve this transformation, it is important to establish an education system that keeps up with this era. Education 4.0, which is a new concept introduced at this point, implies the realization of digital transformation.

The technologies that have emerged within this digital transformation and constitute education 4.0 are inspired by industry 4.0 technologies. Today, beyond the e-learning tools, the internet of things, robots, simulations and augmented reality systems are becoming important (Yazıcı & Düzkaya, 2016). Because, inten-

sive use of educational tools visualized in the education 4.0 environment will be an inevitable requirement (Öztemel, 2019).

Although it is evident that Education 4.0 is affected by Industry 4.0, leaders with an innovative management approach that can manage this change in education gain importance. The first imperative that Industry 4.0 imposes on institutions can be expressed as being an entrepreneur, creating innovation, the ability to change, and gaining speed and agility (Soylu, 2018). At this point, these skills that education managers will acquire are supposed to have an important effect on determining their leadership style.

4. Education 4.0

It can be said that one of the areas where Industry 4.0 processes can be successfully implemented is the education sector. In educational organizations, which constitute one of the basic areas of Industry 4.0 processes, the transition to education 4.0 processes will facilitate the training of individuals with the qualitative characteristics that the business world expects from human resources. Education 4.0, as opposed to memorizing-oriented education systems, is expressed as a new experience-based education system that utilizes technology and meets the expectations of today's world within the framework of a personalized education system (Yelkikalkan et al., 2019).

In the Industry 4.0 process, the training of manpower that can design, develop, manufacture and use the produced technology is an inevitable fact. Expectations from education 4.0, the concept that emerged at this point, are expressed as follows (Öztemel, 2019):

- Ensuring the transformation into educational environments where Digital Culture is becoming widespread,
- Launching innovation-led training programs,
- Implementation of new business models and multidisciplinary education programs (realization of structuring faculties accordingly),
- Keeping up with the changes in accreditation processes, giving up fixed education programs,
- Training programs based on the innovation cycle,
- Using new educational technologies and approaches,
- Training programs enriched with virtual simulation systems (integration of augmented reality and real world),

- Application of distance education technologies and new computer-based learning processes,
- Commissioning of personalized educational environments.

It is a reality that educational organizations aiming to train the manpower that will meet the needs of the society cannot remain silent against the above-mentioned practices. For this reason, leading executives need to be followers and pioneers of such innovations who take risks and renew themselves according to the requirements of the age. All these concepts constitute the content of the entrepreneurship phenomenon (Yolcu, 2017).

5. School Managers Of Education 4.0

Education 4.0, which will meet the expectations of the industry 4.0 world, is a new education model that integrates technology, individuality and exploratory learning.

Training and development practices are highly affected by technological developments. Two important dimensions of technological developments come to the fore. The first of these dimensions is that, thanks to information technologies, education and development practices extend beyond the school environment. The second dimension is that it is easier to access information and the content of the transferred information has been enriched. As a result, educational organizations can adapt to changing conditions quickly and economically by making use of the inclusion of digital learning when necessary or the individualization of education with smart intelligence based artificial intelligence systems (Demirkaya & Sarpel, 2018).

It is understood from the above statements that digital transformation in education will become an important strategic superiority tool for both individuals and educational organizations alike. At this point, it will be an important merit to closely follow the digital transformation in education. It is important that digital transformation in education creates opportunities for schools to evolve to meet today's conditions and their success in achieving this goal.Accordingly, it has been demonstrated in previous studies that one of the most important factors affecting the success of schools is school managers (Balcı, 2001). For this reason, it is expected that school managers acquire "high-level skills" or, in popular terms, "21st century managing skills". Entrepreneurship and leadership are mentioned among the skills that are included in these skills and that will provide the transformation in the industry 4.0 era needed by schools (Larson & Miller, 2011).

6. Reflection Of Entrepreneurship On School Management

Shane and Venkataraman (2000) consider entrepreneurship as a long process in which opportunities are discovered and evaluated for the goals to be achieved.

The lack of a single definition of entrepreneurship is due to the fact that entrepreneurship is a constantly changing phenomenon. This situation also makes it difficult to reveal the features of entrepreneurship clearly (Bayrak & Terzi, 2004). In many different studies, various features attributed to entrepreneurs are encountered.

Chen, Greene and Crick (1998) expressed these features more briefly and interpreted them with roles such as being innovative, risk-taking, relationship building, risk-reducing and goal-achieving. They examined the entrepreneurship tendencies and individual characteristics of the individuals in detail and revealed that the need for success, focus of control, tendency to take risks, initiative, efficiency orientation tolerance to uncertainty, creativity, autonomy need and self-confidence are the characteristics that entrepreneurs mostly possess (Zeelie & Nieuwenhuizen, 1998; Cromie, 2000; Ballı ve Üstün, 2019).

Başar, Altın and Doğan, (2013) defined the entrepreneurial characteristics of a manager as follows: "i) seeks opportunities for continuous change; ii) sets targets for change; iii) predicts and prevents problems; iv) does different jobs or does things differently; v) takes action; vi) continues to strive and strive until it reaches the goal; vii) not only designs and initiate change, but also successfully terminates it". Other studies have displayed that these characteristics can be employed in the field of education management (Köybaşı & Dönmez, 2017).

7. Entrepreneurial Leadership And Reflection To School

Definitions of entrepreneurship and leadership have undergone significant revisions in their respective fields throughout history. The concepts of leadership and entrepreneurship have similar meanings in many ways (Renko et all., 2015). Leadership and entrepreneurship are usually mentioned together.

In the 21stcentury, organizations must constantly pursue opportunities and ensure new initiatives to ensure their continuity. This seems to be an essential component of the entrepreneurship process. For this reason, starting from the beginning of a new initiative, managers have to display the appropriate leadership style in order to manage businessaccurately (Ensley et al., 2006). Only certain qualities possessed by entrepreneurial leaders are of great importance in terms of

being able to demonstrate and sustain the existence of organizations in competitive markets (Yolcu, 2017).

Leadership is a task that has to be fulfilled by the entrepreneur. At the same time, entrepreneurship leadership is one of the most important elements of managerial success. It is the duty of the manager to direct people to the same goal, and to motivate and support them in achieving a new goal. For this reason, entrepreneurs also show leadership behavior to influence those around them in innovating (Arıkan, 2002; Renko et al., 2015). It has been suggested that new initiatives can only be undertaken by entrepreneurial leaders (Chen, 2007).

In the same direction, entrepreneurial leaders are defined as those who have started a new initiative or have made changes in the existing organization that will reveal noveltythrough product development or innovation (Surie & Ashley, 2008).

Entrepreneur leaders' success in organizations is realized with some of their characteristics. When the literature is examined, the most important features of both the entrepreneur and the leading manager are 'being visionary, predictive, motivating, that is, being honest and trustful, being success-oriented, taking risks, being creative, flexible, persistent, having high communication ability and patience' (Fernald et al., 2005; Darling & Bebee, 2007). A leader whose entrepreneurship comes to the fore an display most of these characteristics (Yelkikalan, et all., 2010). Leaders with these characteristics can be expressed as entrepreneurial leaders.

In summary, entrepreneurial leadership is a type of leadership that follows innovations, exhibits the behaviors mentioned above, and includes behaviors related to taking advantage of opportunities (Alvarez & Barney, 2002). Entrepreneurial school leadership is defined as "being a leader in bringing opportunities to school and creating innovative school culture in the development and achievement of the school's goals" (Bayrak & Terzi, 2004).

8. Conclusion and Recommendations

Industry 4.0 applications and technological rapid changes have transformed societies. In this era of industrial revolution, smart systems and their products, such as smart societies, are mentioned (Bozkurt, 2019). Entrepreneurship is one of the characteristics that can manage smart societies.

It is seen that education organizations are affected by the industry 4.0 revolution and education 4.0 applications come to the fore (Öztemel, 2019). At this point, educational activities have ceased to express an education in the form of

teaching fixed information that has been previously produced. This has been replaced by education 4.0, which is the education system for research, knowledge production, self-confidence, and talent development (Demirkaya & Sarpel, 2018).

It is also important for managers to display their entrepreneurial characteristics in educational organizations. Today, school administrators are expected to assume the role of entrepreneurship, which is a functional behavior, beyond the leadership roles in the general management sciences that remain in a more theoretical dimension. The school's adaptation to the diverse environment and pioneering the transformation require school administrators to assume the role of entrepreneurship (Bayrak & Terzi, 2004).

In the field of school management, it is seen that entrepreneurship will provide important advantages in the effective school development process. The fact that school administrators are entrepreneurs can have positive results in educational organizations not to interfere with the work, to follow the innovation and to capture the digital age. It is therefore important to determine the entrepreneurial leadership levels of school administrators (Köybaşı & Dönmez, 2017).

In terms of creating the educational outcomes required by Industry 4.0, the rise of entrepreneurial leadership in organizations can be effective in creating new ideas, developing new production techniques, and strengthening organizational creativity (Zorlu & Tetik, 2018).

In line with the requirements of the 21stcentury, form of administration is required to be influenced by education 4.0. At this point, arrangements should be made in which school administrators can exhibit their entrepreneurial characteristics

At this stage, organizational training activities have ceased to express a kind of training in the form of teaching previously produced fixed information. This has been replaced by education 4.0, which is the education system for gaining the will to solve problems encountered with the information obtained as a result of research, knowledge production, self-confidence and talent development. Especially in the coming period, the effects of the Industry 4.0 process will be felt more.

Finally, it is a reality that entrepreneur leaders have increasing importance for all kinds of institutions and organizations, educational organizations and, in total, for the future of the country.

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CHAPTER 13

RISK MANAGEMENT IN OPEN AND DISTANCE EDUCATION

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Introduction

The developments in the field of informatics and technology today are reflected in the education system. As a result of new searches and needs in education, technologies started to be used in teaching process and distance education system emerged. Distance education is a smart, contemporary and innovative education system which is completely independent of time and space, without the obligation of the student and the faculty member to come to the campus (Simpson, 2018). Distance education is not a second class education system applied besides formal education. On the contrary, it is a state-of-the-art education system which has been applied in advanced developed countries for years and uses the latest measurement and evaluation methods (Viola, Saeki & Hendricker, 2019).

In distance education, lectures are carried out in virtual environment as vivid, video and audio courses through existing computer technologies in which students can watch whenever they want. According to Aydin (2005), open and distance learning has often been defined as the form of instruction where learners are located at different times and places than the teacher(s) and the interaction between them takes place through printed or electronic communication media.

It is known that many transactions that have been in practice for many years have been transferred to the internet and the rapid development of technology

have enabled the use of different methods in education. The distance education system has a number of important advantages over other education systems. Providing equal opportunities in education to people living in rural areas and the fact that students can complete their programs without leaving their places are examples of such advantages. Considering these mentioned advantages, open and distance education systems have become one of the more used education models in the recent years (Can, 2019).

Distance education is a discipline that provides equality in education, enables everyone to receive lifelong education, can contribute to the realization of individual and social goals, and supports individual learning by using educational technologies (Cho & Berge, 2002; Hauser, 2013). In addition to advantages of open and distance education, there are disadvantages which should be mentioned. The advantages and disadvantages are summarized in Figure 1. Although open and distance education offers many advantages and have some disadvantages, many problems can be encountered in distance education due to various factors such as technological deficiencies, difficulties in use and management of distance education system, lack of quality and standardization. These points can be categorized as potential risks of open and distance education which is the main subject of this chapter. Risks of open and distance education and how to manage these potential risks are crucial for the achievement of open and distance education applications.

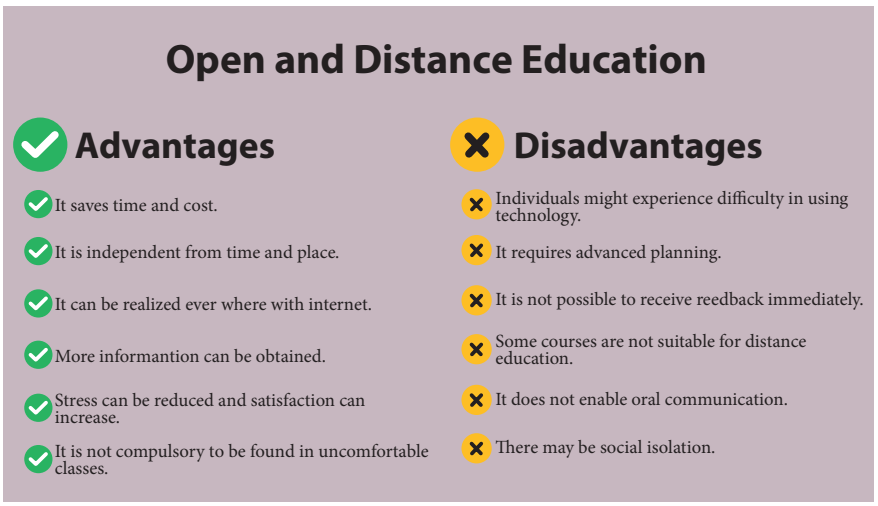

Figure 1. Advantages and Disadvantages of Open and Distance Education (Yesil, 2017)

Definition of Risk

Risk can be defined as the potential to be vulnerable to harmful activity. Threats, weaknesses, effects and likelihood are components of risk. It is the element, factor or course of uncertainty as to damage, loss, danger or damage. Risk involves opportunity, danger and and uncertainty in which opportunity refers to using risks in favor of someone or something, danger is the risk emerging from the events and uncertainty means risk arising from change (Guven & Guven, 2017). Risk is the element of harm that one wants to avoid. It expresses uncertainty, suspicion, probability of loss and it refers to the possibility of damaging the system by taking advantage of a certain weakness of the system.

Technology and Risk: Potential Harms

In today's technology age, individuals started to live most of their lives in electronic environments. Individuals, governments, public institutions, social platforms, private companies and educational institutions started to communicate through the virtual media Hillson, 2017). In line with this, technology risks are more noticeable and considered as important recently. Security vulnerabilities or errors on information systems lead to serious business crises and loss of reputation. For this reason, many regulatory agencies impose new compliance obligations. Information technology risks should be identified, measured and managed as part of all risks in the organization. The approach applied to manage and balance information risks is called information technology risk management (Benaroch, Lichtenstein & Robinson, 2006; Zou, Kiviniemi & Jones, 2017; Mollaogullari & Ozdogan, 2018).

The concepts of technology and risks in the cyber world are now taking place in the world with our data and lives that we produce with our virtual and real assets. Most of the communication we establish with other people is realized in electronic media and environments. In this virtual life we have mentioned, we have to protect ourselves and our institutions against cyber attacks and risk. For governments, when we look at risk on the Internet, the first thing that comes to mind is the protection of citizens, public institutions, critical infrastructures such as communication, finance and energy, which are important information systems, against hackers or other states. In general, even if the experiences of stakeholders including individuals, governments and institutions are similar but differentiated by significant differences, these stakeholders can maintain their computing systems reliably, and protect themselves against cyber attacks and unauthorized access which are crucial risks (Ganguly, Nilchiani & Farr, 2017).

What is Threat?

Every risk is associated with a particular threat that adversely affects the confidentiality, integrity or accessibility of information systems value. The threat can be considered as the possibility of damage. For example, virus is a threat. Threats can come from outside the organization as well as from within the organization. In the absence of any weakness, the source of the threat is not a risk. This step should identify potential sources of threat and list the statements that may pose a threat to information systems. Wallander and Keohane, (2002) described the most obvious sources of threat as:

- Environmental (flood, lightning, storm, earthquake, etc.)
- Organizational deficiencies (not fully defined responsibilities, etc.)
- Human errors (writing passwords on paper, accidentally deleting files, etc.)
- Technical errors (hardware failures, short circuit, hard disk failure, etc.)
- Planned actions (hacking, phishing, malicious code usage, theft, etc.)

The major threat sources have been destructiveness, espionage or just human errors and accidents. In the first two cases the strength of the threat depends on two important factors: the motivation cause of the threat and the appeal of the value of the information system.

Risk Management

Risk management is the management in which necessary checks are fulfilled, reviewed and reported in order to identify and evaluate the risks and put them at a reasonable level. Risk management is the process of taking action to identify, evaluate and reduce or eliminate risks to an acceptable level (Cooper, Grey, Raymond & Walker, 2005). It is possible to perform information systems risk management with five basic functions, each of which has different importance but affects and supports each other:

1. **Risk Identification**
2. **Risk Analysis**
3. **Risk Assessment**
4. **Risk Intervention**
5. **Monitoring Risk Management**

According to Emhan (2009), risk management is a management tool that strengthens the decision mechanisms by applying all the mechanisms (administration) at all levels and all functions that may have an impact on the achievement of the objectives and objectives of the administration. Risk management process is a management tool and refers to all the mechanisms that may have an effect on the achievement of the objectives and targets of the administration.From a general point of view, there are several steps in risk management process which is shown in Figure 2.

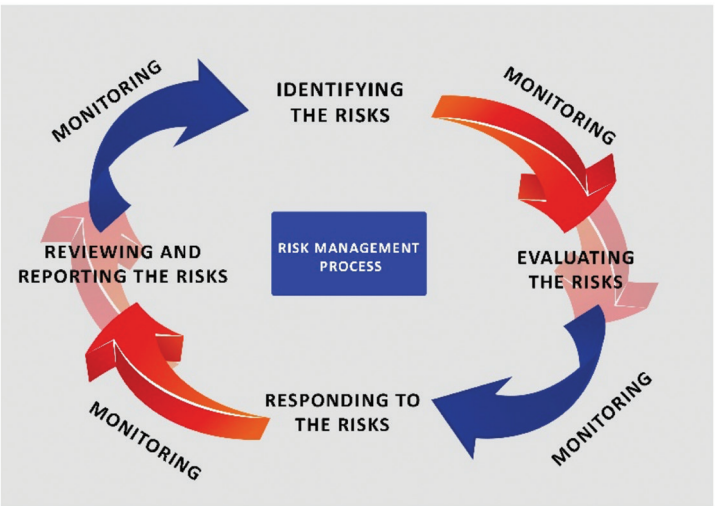

Figure 2. Risk Management Process

Firstly, risks should be identified. Identification of risks is the process of determining, grouping and updating the risks that prevent or make it difficult for the administration / unit to reach its objectives by predefined methods. Then, risks must be evaluated to determine which of the identified risks will be responded and the most appropriate response. In terms of prioritization, risks are listed according to their probability of harm. Responding to risks is determining the response, reducing threats and evaluating the opportunities which can emerge. As the last step, reviewing and reporting the risks are necessary in order to determine whether risk management process is fully achieved or not (Galli, 2017; Usman & Kaygusuz, 2019). It is important to monitor all stages every time. Advantages of risk management are:

- To contribute to the improvement of the performance of the administrations and their units and to make them more effective in achieving the key results targeted.

- To strengthen the decision-making mechanisms,
- To help increase the continuity and quality of the services provided,
- Increase efficiency in resource allocation,
- Reduce potential losses, reduce costs,
- Improve accountability,
- To ensure compliance with legislation and regulations,
- To create a more positive image in the public (Albery, Borys & Tepe, 2016).

There are critical factors for risk management to be successful. In order to achieve this, risk management team should internalize, support, monitor, know that each member of the team has an important role, develop a common risk management language, provide guidance and counseling, repose on confidential evidences and give importance to monitor, evaluate and report (Cornett & Saunders, 2003; Ramona, 2011). From an other perspective, risks of open and distance education system can be listed as follows:

- poor content quality,
- lack of technological infrastructure,
- inaccurate learning management and content management system selection,
- incorrect establishment of organizational structure,
- lack of education documents, materials and manuals,
- lack of time,
- Training of users,
- information security risk,
- lack of communication and support units in order to meet the demands (Cronin, 2017).

Risk management planning should aim to monitor and control threats and weaknesses to mitigate potential impacts. In order to manage risks, priorities and risks must be known. Therefore, acceptable risk tolerance and appropriate controls should be defined taking into account their severity and the effects when risks occur. Policies, procedures, guidelines and standards should be developed to define roles and responsibilities and to provide guidance and instructions.

Overview on Information Technology and Risk Management

Nowadays, all kinds of economic and individual developments are becoming more and more connected to the internet and information technology systems. As a result, risks on systems are more recognized and seen as more important. Vulnerabilities or errors in information systems lead to serious business crises and loss of reputation. Therefore, many regulatory agencies impose new compliance requirements.

A risk management framework should be established and maintained for the assessment and management of IT risks. Barafort, Mesquida and Mas (2017) stated that the risk management framework should include general and agreed IT risk levels, risk response strategies and residual risk. Oznacar and Dagli (2016) stated that technology malfunction is a common risk factor for higher education institutions. Unexpected events that may have any potential impact on the objectives of the organization are identified, analyzed and evaluated in advance. Risk recovery strategies are applied to bring the remaining risks to an acceptable level. The results of the assessment should be understandable and accountable in financial terms to allow stakeholders to tolerate risks at an acceptable level.

Being able to manage risk in education institutions must be a necessity while preparing open and distance education practices. The use of technology without the required education and equipment will give more harm than benefit. It is obvious that, besides its benefits, Information Technology (IT), at this point, brings along various worries. For example, individuals meet others at imaginary environments without knowing each other well and thus find themselves open to some threats; their interest in their school and lessons decreases due to frequent use of the technology; they direct their attention to other issues; they adapt different styles of communication, which weaken their actual socialization; and they share personal information and privacy. Figure 3 shows the risks in an IT environment and precautions that can be taken when faced with such risks. When the figure is examined, it is seen that there are four different potential IT risks which includes natural disasters and systems failures, internal and external malicious threats, IT policy external regulations, application performance and IT performance. The precautions pointed out in the figure are important in terms of coping and managing the risks.

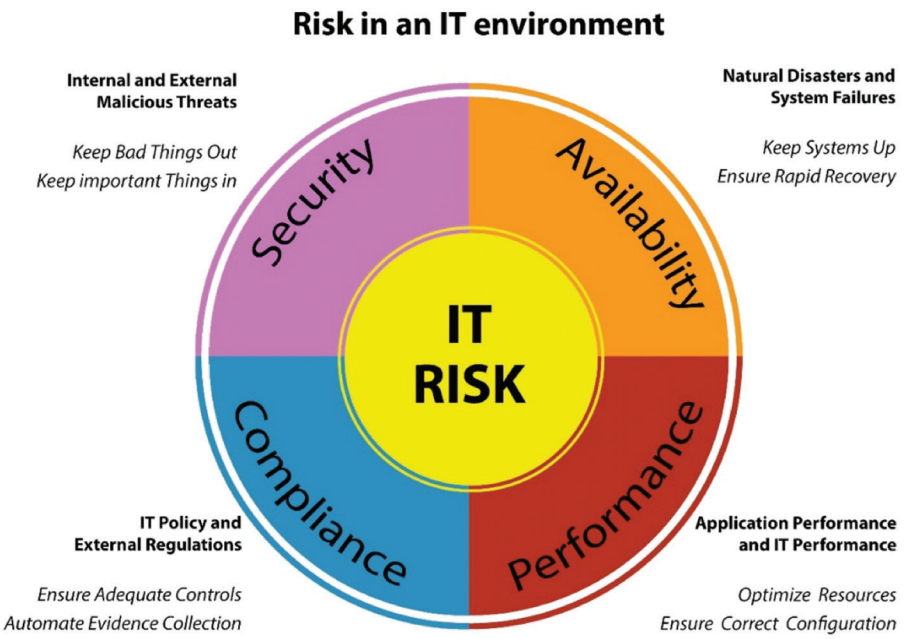

Figure 3. Risk in an IT environment

(Alhawari, Jarrah & Hadi, 2017)

In terms of risk management within the scope of information security management system, it has been determined that an approach managed in the technology-human-education triangle should be taken into consideration in order to provide a high level of information security. Persons, teams or units undertaking risk management are responsible for clearly identifying all situations that may lead to loss in the organization by controlling the risk and financing the risk, and improving these situations and reducing loss. These approaches provide benefits for the institution in terms of allowing risks to be managed by knowledgeable people. If the organization does not have a risk management team or risk management unit, those who are most knowledgeable about how the organization works should undertake the risks in the organization (Woodlock & Ross, 2001).

Monitoring IT Risk Management

In addition to information systems risk assessments, the institutions have the risk management monitoring activities carried out by internal and / or external auditors. As a result of the evaluations made, the risks are determined and a reactive approach is followed through the correction of the findings. However, it is

a preferred approach for business units to make self-assessments of information systems values related to them and to identify risks and take proactive measures without identifying auditors. However, many institutions do not have sufficient information on information technologies and self-assessment (Aydin, 2018).

Risk management should be monitored and changes should be made as necessary. Policies and procedures should be established and practices should be checked by internal and external audits to determine if risk responses are being delivered effectively. Monitoring at the risk determination stage is possible by determining the number of risks, the presence / update of the risk record, the frequency and quality of the process, and the identification of unidentified risks according to its value. At the risk identification stage, concerns of the Senior Management and the Board of Directors should be shared and new risk occurrences and an increase in the likelihood of existing risks should be reported. With the monitoring to be carried out at the risk assessment stage, the number of high and intermediate risks, the presence of a risk profile, how often the prioritization is reviewed and the suitability of the risk calculation should be examined. In the risk assessment phase, inputs (priorities and concerns) from the Senior Management and the Board of Directors should be provided and high-priority risks, accepted risks, ineffective controls and risks requiring mitigation should be reported (Lam, 2003; Burnaby & Hass, 2009).

The monitoring of the risk response phase should determine the existence and timeliness of the action plan (who was appointed, when it will be completed), the appropriateness of the plan's operation and the effectiveness of the actions taken against the risk. Monitoring and audits should be provided by the Senior Management, Board of Directors and Internal Audit, and the information *"What are the actions to be taken against risk"* and *"Are appropriate actions taken?"* should be shared.

O'Donnell (2005) suggested that a successful risk management program depends on the responsibility of senior management, the full support and participation of the information technology team, the competence of the risk assessment team, awareness of the organization members and cooperation. The risk assessment team should be able to apply risk assessment methodologies on specified systems, identify critical risks, and recommend cost-effective practices that are appropriate to the organization and meet the need. Organization members will contribute to the risk management process as long as they follow the defined procedures and comply with the controls applied. In the coming period, IT risk management will be included more in the agendas of all senior executives. In order to obtain the expected benefits from information systems investments, it is inevitable

that there are studies to create awareness in the plans, IT risks and organizations, and to evaluate the information systems risks (Fraser & Simkins, 2016; Hopkinson, 2017).

Establishing IT Risk Management Framework

A risk management framework should be established and maintained to assess and manage information technology risks. The risk management framework should include general and agreed IT risk levels, risk coverage strategies and residual risk. Unexpected events that will have any potential impact on the organization's goals are identified, analyzed and evaluated in advance. Risk-taking strategies are applied to increase the remaining risks to an acceptable level. The results of the assessment should be understandable and explained in financial terms so that stakeholders can tolerate risks at an acceptable level. Risk management policies and documents supporting these policies should be established for successful identification, analysis and monitoring of risks. Establishing a risk management committee is one of the preferred methods in order to create a risk management awareness and to create and share a risk protocol suitable for the whole institution.

Establishing a structural risk management improves decision making, protects information values, makes operations safe and supports the organization's compliance with laws and obligations. The goal is not only to eliminate risk, but also to create opportunities to manage the risks that we inevitably face and avoid negative consequences. This requires organizations to think about the future, take a proactive approach in assessing risks, and at the same time maintain cost balances between managing risk and delivering expected benefits. IT, business process managers, auditors and legal units must work closely to determine critical information systems values. Such a study is needed to identify information systems weaknesses, prioritize related risks, and develop and implement an appropriate risk-response strategy. Risk management should be monitored by internal and external groups in terms of effectiveness. Responsibilities related to risk management and response should be distributed, corporate risk appetite should be clearly defined, risk glossary should be created when necessary, tools used in risk management, monitoring and reporting approaches should be determined (Aven, 2016).

Risk Management in Open Education: Strategies and Recommendations

A comprehensive risk assessment and analysis process is required for successful risk management. Risk assessment and analysis is a set of methods that provide a comprehensive understanding of the risk associated with the variable addressed in strategic decisions. Advantages of risk analysis are:

- It provides a systematic and logical approach to decision making.
- It enables a detailed analysis of options in complex decision problems.
- It enables the decision maker to confront risk and uncertainty in a realistic way.
- It helps to communicate within the organization.
- It allows decision makers to determine how much information is collected for a decision problem.
- It highlights judgment and intuition in decision making (Villa, Paltrinieri, Khan & Cozzani, 2016).

Taking preventive and intervening precautions to identify and intervene the potential risks in open and distance education can eliminate or minimize the negative outcomes. Accordingly, the quality and effectiveness of open and distance education system applications will be improved. The lack of technological infrastructure in internet-based distance education is one of the most important limitations of this type of education. The reason for this is the fact that computer and internet technical problems will affect the continuity and sustainibility of education as well as the motivation of students and teachers (Bell, 2016).

For effective learning and teaching activities in distance education; students, instructors and instructional materials should meet at the same platform through information and communication technologies simultaneously and visual and auditory information should be provided. A non-interactive distance education application will not reach a sufficient level of success. Especially in higher education, the use of internet in the learning environment; there is a need for improving the practices and removing problems arising from space, time, technology, e-class and so on. Galvis (2018) also mentioned that it is crucial to ensure that open and distance education programs are accessible for all people and costs are at an optional level. In addition, the use of internet networks equipped with high technologies requires high costs for both individuals and institutions. This raises the issue of accessibility in distance education using internet technologies and the right of in-

dividuals to equal education. Technological developments should not be at the expense of individuals receiving distance education and everyone should be able to take part in internet based distance education applications on equal terms (Arat & Bakan, 2011; Khanna, 2017).

As a result of the technological transformation that has emerged with the rapid developments in information technologies, larger information can be stored and reproduced with smaller portable devices. The concept of information security has emerged with the effective use of tools such as computers, mobile phones, internet and smart devices. In this process, information sharing behaviors such as giving and receiving information increased and this situation changed the definition of information security and gained more importance. In this process where we have witnessed crimes more than we could ever imagine using internet. Therefore, open and distance education applications using internet should be protected from internet crimes such as copying of illegal and inappropriate publications and illegal use of copyrighted computer software (Wolcott & Betts, 2007).

When precautions regarding risk management in open and distance education are considered, technical and legal measures regarding digital data security must be taken in order to reduce and/or eliminate these mentioned risks. However, the most important of these measures is the human factor. Individuals and organizations generally take precautions about information security when they have a serious problem. However, information security is an important issue from the beginning to the end. Therefore, it is important to raise awareness about information security and thus to create information security culture with the support of information literacy. Informative training programs for information security should be organized in an interactive manner while providing open and distance education are really important. Thus, it should be planned to increase information literacy and digital data security awareness level of individuals. As a matter of fact, it is seen that digital data security awareness and individuals' information literacy should be increased in order to ensure digital data security (Avci & Arslan, 2019).

The concept of digital data security comes to the forefront when risks regarding open and distance education are considered. The process of processing digital data has accelerated in the light of developments in application software and the Internet. These developments, which facilitate human life, have brought with the risks of improper use. In order to protect the data in the electronic environment such as copyrights and ethics, confidentiality and encryption, security of digital data has gained importance. Today, information security is defined as ensuring the confidentiality, integrity and accessibility of information at any time. These components, which cannot be considered as independent, are the basic elements

of information security. The concept of digital data security in the information security process is described as an effort to create a secure application environment in order to prevent the disruption of integrity and protect it from unauthorized access in the process of storing, reproduction and transferring digital data to another source Mesran, Syahrizal & Rahim, 2018).

Organizational, social and pedagogical dimensions are other important parameters that affect success and failure in the implementation of distance education. In other words, it is inevitable that variables such as learning styles of the learners and the organizational environment in which the implementers are involved will affect the success of distance education (Erturgut, 2008; Aydemir, 2018). Other organizational risk factors in open and distance education include lack of sufficient knowledge of students and teachers about computers and the internet. Learners might experience different levels of anxiety about computers and the internet. In order to manage this situation, learners and teachers might receive training regarding how to use and apply open and distance education. In distance education, it has been suggested that the psychological gap between the student and the instructor may contain a potential misunderstanding, that the teacher's intention to tell does not coincide with the student's comments,and that the expectations of the student may not match the aims of the teacher. Another psychological factor emphasized is that the expectation level of a student taking distance education courses is lower than that of a face-to-face student and personal expectation is associated with achievement level. Using open and distance education platforms might be used interactively in order to achieve these situations.

Information and Communication Technology risk management strategies are mentioned in the report published by European Banking Authority in 2019. These risk management strategies are as follows:

- Access, authentication, authorization control
- Organizational structure
- Event management
- IT policy management
- Auditing / Evaluation
- Training and awareness raising
- Operational design
- Value inventory creation, classification and management

Risk management in open and distance education should be followed to determine and evaluate and reduce the risk to an acceptable level. Establishing a risk management framework and monitoring the process are crucial components of risk management in open and distance education.

Conclusion

In this chapter, a brief definition of open and distance education, definition of risk, potential harms caused by technology risks, threat, risk management, overview of IT risk management, monitoring and establishing risk management and strategies and recommendations for risk management in open and distance education are explained and discussed with relevant theoretical approaches and findings from literature.

The increasing demand for education in our lives necessitates the change in the purpose and quality of education. Today, the duty of educators is to look at the internet and computer technologies which have become a symbol of change and transformation in almost every field as a teaching tool and to benefit from them for the purposes of education. However, it is not enough to be successful in distance education by applying internet technologies only. Open and distance education applications have organizational, social, pedagogical and ethical dimensions and it is considered that distance education applications that are structured with the requirements of these dimensions will perform better (Rashid & Rashid, 2012).

Risks in education can be expressed as the positive or negative effects of the internal and external factors that may arise in the future on the realization of the objectives and targets of the educational practices. Besides formal education, open and distance learning as an independent learning method has become more important. There are, of course, potential risks in open and distance learning depending on the environment and the structure of the technologies used in the organization. Education policies should be developed to support open and distance learning by considering these potential risks and solutions should be provided to prevent potential problems (Oznacar, 2018).

In order to cope with the risks that may arise in open and distance education, all relevant stakeholders or team members including administrators, teachers and other persons in the institution should be well organized and act with a better understanding of the situation. Any risks that may occur should be kept in mind and evaluated. As stated in this chapter, risk analysis should be carried out as a teamwork. If the risks highlighted in this chapter are identified, a procedure should

be adapted and action plans should be made to minimize risk levels in open and distance education.

According to the technology strategy to be determined at the beginning in the educational technology development process, considering many factors such as cost, time, risk, access and interaction is important in order to make decisions that will affect and direct future activities regarding intervention for risk management. As a decision-making mechanism, institution management should base its decisions on comprehensive risk assessment and analysis results. In this context, technology selection and risk management becomes more important in the training development process, especially during the presentation phase. It is advocated by the academic environment to focus on improvement efforts after a technology strategy is developed. Therefore, the institution learns completely from experience. In the selection of new technology, the institution should identify the needs and obstacles that may arise as an organization during the transition to new technology before the successful implementation of the technology in question. This will prevent education institution from the potential harms that can be caused by the risks (Nurse, Creese & De Roure, 2017).

In the selection of technology / environment, the institutional process should focus on the process such as effective use of institutional resources, suitability for educational content and being economical. In terms of learners who are the recipients of education in the process, criteria such as being economical, accessibility, flexibility and ease of use should be taken into consideration. Addressing the technology selection process for learners will be an element that increases learning. Planning is essential for technology to play an active role in the educational process. The institution will be able to manage more complex technologies and develop stronger learning models. Therefore, risks might be prevented in this way.

In conclusion, open and distance education institutions should implement a holistic and strategic technology plan, which will be structured with technology-oriented policies by harmonizing it with its mission and vision to meet the education demands of all stakeholders. Identification of risks, establishing and monitoring risk management in open and distance education is really crucial. Practices should be carried out, maintained and adopted as an institution policy for risk management in open and distance education.

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He is editing Asian Journal of Distance Education since 2003 and has been associated with several other peer reviewed journals including SSCI / SCOPUS Journals as Reviewer, Editor and Editorial Advisory Board member in the field of Open and Distance Learning. An author/editor of several books and research papers on educational technology, educational multimedia and eLearning, Dr. Sharma is a practitioner promoting Open Educational Resources (OER). He has been a trainer and capacity builder in the field of educational technology, and has supervised doctoral research in the field. He has conducted workshops and evaluation activities for IGNOU, CEMCA, COL, UNCTAD, and Aga Khan Foundation, amongst others.

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Ebba Ossiannilsson, Professor, Dr. Consultant, expert, researcher and quality reviewer in e-learning, open online learning, OER, MOOC, especially regarding quality and benchmarking. Ossiannilsson earned her PhD from Oulu University, Finland, with a dissertation on international benchmarking, and quality enhancement on e-learning in Higher Education. She frequently participates as a speaker at international conferences. Ossiannilsson is a consultant and board member in several international and national associations and projects. Internationally she works with ICDE, EADTU, EDEN, European Commission and UNESCO. She was the research leader for the ICDE Quality standard study 2014/15 and also the State of the art in blended learning. She Chair the ICDE OER advocacy Committee. Ossiannilsson earned the title EDEN Fellow 2014, Open Education Europa Fellow 2015, and EDEN Council of Fellows 2015. Ossiannilsson has a long career at Lund University, Sweden.

Mahmoud HAWAMDEH

Mr. Hawamdeh is a Ph.D. candidate in Computer Education and Instructional Technology at Near East University in North Cyprus. He served as a Director of Continuing Education and Community Service at Al-Quds Open University from January 2013 to October 2019. He was responsible for the overall direction, development, coordination, and supervision of Center In addition to managing the proposal writing and the implementation of several projects which summarized but not limited as follows: (1) Mobile educational funded by CRDP/UNDP, (2) Action Research for E-Learning in Palestine School funded by Belgian Development Agency (BTC), (3) Virtual Reality as an Innovative and Impressive Tool in Palestinian Higher Education Institutions funded by Erasmus +, (4) English Language Summer Camp (ESC) funded by U.S. Consulate General in Jerusalem, (5) Promoting OER Concepts, Reuse, and Practices in the Arab Countries funded by UNESCO. (6) Teaching English as Foreign Language in Palestinian HEIs: An e-Learning Initiative that Bridges Educational and Socio-Political Gaps (TEFL) funded by Erasmus +, and (7) Boosting Innovation in Education and Research of Precision Agriculture in Palestine (BENEFIT).

As a member of the team, Mr. Hawamdeh was involved in producing the six policy papers on the most successful use of ICT in student-centered learning in the Palestinian education system as a result of the Action Research project conducted by the Open University of Cyprus and Al-Quds Open University in 2014-15 (https://www.enabel.be/story/e-learning-palestine). Mr. Hawamdeh worked

as Coordinator for Europe Commission Cooperation Programs such (Erasmus+, Europe Aid, H2020.etc). He was responsible for reinforcing and coordinating and the participation of Al-Quds Open University in these programs.

Mr. Hawamdeh worked as Head of Training and Development department at the Information and Communication Technology Center (ICTC) in Al-Quds Open University, where he had a significant contribution in founding this department to be one of the leading ICT training providers in Palestine. Several training projects were implemented by this department includes training courses funded by Mercy Corps & USAID, GTZ, ISESCO & PNCECS, UNDP, UNRWA.... etc. Prior to joining Al-Quds Open University, he served as a Training Manager for Oracle Training Center in Arab Technology Systems (ATS) where he was responsible for training programs offered by ATS.

In His professional career Mr. Hawamdeh delivered several papers and presentations at national and international conferences. He participated as International speaker in the UALL ANNUAL CONFERENCE 2016, held at University of Oxford (https://www.uall.ac.uk/2016-annual-conference), Guest Speaker in the International Symposium of Education and Values (ISOEVA) (http://www.isoeva.com), held by International Journal of Eurasia Social Sciences on 05-08 October 2017 in Turkey, and participated as Keynote Speaker in the 7th International Social Studies Education Symposium (http://usbes2018.ahievran.edu.tr/), which was held at Kırşehir Ahi Evran University on 11-13 October 2018.

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He entered Near East University (NEU) Computer Education and Instructional Technology Department and graduated in 2007. He completed his Master of Arts education between 2009 and 2011 on "Education Technologies" and was assigned as full-time lecturer. He completed his PhD education between 2012 and 2016 in "Education technologies" and became an assistant professor.

In 2017 he assumed the tasks of being the chairman of 2-year "Computer Assisted Design and Animation" associate degree program and "Common Computer Courses Coordinator" of the entire university. In 2018 he was assigned as the director of NEU Vocational College. He is still managing 18 associate degree programs and other tasks under this unit. In addition, he is lecturing as a lecturer at Computer and Teaching Technologies Department and acting as the counselor of several MA-PhD students.

He is executing the technology-assisted family participated activities of a public kindergarten in Nicosia on a voluntary basis. Here he is reinforcing the cooperation between the school and families and ensures that working parents who suffer from time restraints can spend quality time and perform activities with their children.

On the other hand, he is paying attention to academic studies and has published articles indexed at Web of Science, Scopus, ESCI and SSCI. He is continuing his studies especially on coding and robotic education, distance education, ICT in education and parent technology usage.

He participated in several national and international (Northern Cyprus, Turkey, Europe) scientific conventions. He is the author of "Usage of information and

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include perfectionism in children and adolescents, who are also the subject of master's and doctoral theses, perfectionism in university students, communication skills of psychological counseling students, parental attitudes, personality development of preschool children and group work in teaching.

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Tülen SANER

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Business Administration Department in 2007. In the 2009-10 Academic year Prof. Dr. Saner was granted a Tourism Management Scholarship at the School of Tourism, Bournemouth University through an EU Scholarship Programme. Upon her return from the UK because of her successful career path and ambition she was appointed as the Director of School of Tourism and Hotel Management in 2009. Since 2018 she is serving as a Dean of Faculty of Tourism.

Prof.Dr.Saner has numerous international published articles and proceedings (some indexed in SSCI) and has been reviewing for various international journals. Prof.Dr. Saner, supervised numerous PhD thesis, master thesis and graduation projects.

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Nedime KARASEL AYDA

Dr. Nedime Karasel is headmaster in Northern Cyprus. She is graduated from Maarif College. Then, she is graduated from Teacher Academy. She has Phd degree in the field of educational management from Near East University. She is teaching at University of Kyrenia and her research interest is management, universal values and course books.

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Prof. Dr. Gokmen Dagli completed her secondary school in 1986 at Lefkoşa Türk Lisesi. He completed bachelor degree in the Military High School. He gained a master degree in the field of Educational Administration, Planning, Economics at Near East University in 2004. Then, he completed doctorate programme in the field of Educational Administration, Planning, Economics at Near East University in 2009. He has started teaching and research activities between 1998-2008 as a lecturer that he taught national defense courses. He became a full time lecturer at Near East University and University of Kyrenia and he is working as Prof Dr. at Education Faculty in 2011. He is teaching school experience, principles and methods of teaching, introduction to educational sciences, etc. Gökmen Dağlı is the member of academic journals and he has international books chapters, publications and research projects. He is vice rector of University of Kyrenia and Dean of Faculty of Education

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Having contributed to academic studies in various indexed journals, Baştaş is an active member of the Balkans Environmental Association-BENA.

Başak BAĞLAMA

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