

Living in the Meta Immersive Smart 21st Century and Beyond: A Digital Transformation in Open and Distance Learning (ODL)

Meta Sürükleyici Akıllı 21. Yüzyılda ve Ötesinde Yaşamak: Açık ve Uzaktan Öğrenmede (AUO) Dijital Dönüşüm

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Araştırma Makalesi Research Article

Geliş tarihi/Received:
27.04.2022

**Son revizyon teslimi/Last
revision received:**
22.06.2022

Kabul tarihi/Accepted:
07.06.2022

Yayın tarihi/Published:
01.11.2022

Atıf/Citation:

Kurubacak, G., Sharma, R. C., & Uğur, S. (2022). Living in the Meta Immersive Smart 21st Century and Beyond: A Digital Transformation in Open and Distance Learning (ODL). *TAM Akademi Dergisi*, 1(2), 86–95. <https://doi.org/10.58239/tamde.2022.02.001.x>

DOI:

10.58239/tamde.2022.02.001.x

ABSTRACT

Open and distance learning system is now well-established serving millions of students globally. The technological developments in the 4th industrial revolution era have impacted open and distance learning system. Artificial intelligence, blockchain, 3D printing, computer vision, Internet of things, Internet of behavior etc. have introduced smart services in teaching, learning, curriculum design, learning design, user experience, instructional delivery and evaluation and assessment systems. In this paper we discuss how such technologies have brought the digital transformation to open and distance learning. We also examine the meta immersive smart future of open education.

Keywords: Open and Distance Learning, Meta Immersive Smart Future, Meta Immersive Smart Open and Distance Learning, Future, Digital Transformation

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ÖZ

Açık ve uzaktan öğrenme sistemi dünya çapında milyonlarca öğrenciye hizmet veren köklü bir sistemdir. Dördüncü sanayi devrimi dönemindeki teknolojik gelişmeler, açık ve uzaktan öğrenme sistemini etkilemiştir. Yapay zeka, blok zinciri, 3D baskı, bilgisayarla görme, Nesnelerin İnterneti, davranışların İnterneti vb. öğretme, öğrenme, program geliştirme tasarımı, öğrenme tasarımı, kullanıcı deneyimi, öğrenme sunumu ve değerlendirme sistemlerinde kullanılan akıllı hizmetleri kullanıma sundu. Bu makalede, söz konusu bu ileri teknolojilerin, açık ve uzaktan öğrenmede dijital bir dönüşümü nasıl yapılandığı tartışılmaktadır. Öte yandan bu çalışmada; açık ve uzaktan öğrenmenin meta sürükleyici akıllı geleceği de incelenmektedir.

Anahtar Kelimeler: Açık ve Uzaktan Öğrenme, Meta Sürükleyici Akıllı Gelecek, Meta Sürükleyici Akıllı Açık ve Uzaktan Eğitim, Gelecek, Dijital Dönüşüm

Introduction

In the 21st century, the scope of Open and Distance Learning (ODL) is changing rapidly and dramatically. Alongside a radical digital transformation, we are also experiencing pandemic situations that force the face, content, and dimensions of ODL to improve for the future of future. This is a revolution in learning with transhumanist technologies. This is the ODL revaluation, which is from a digital transformation to a sustainable human one. Besides, ensuring not only institutional and program quality but also personal proficient in ODL has become the heart concept to internalize this point of view to our daily lives. In short, it can be said that the 21st century is a period in which logical, sustainable, technological, and ecological developments constantly offer innovations beyond our imaginations in ODL.

In this study, we would like to talk about the adventure and journey of ODL from the beginning to the 2020s, in the context of what was mentioned above. Especially, we would like to emphasize the foundations and philosophy of ODL that have evolved over the years.

1. The Basics of Open and Distance Learning (ODL) in the 21st Century

The 21st century and beyond are to prepare us for our transhumanist future and embrace both technical aspects and social dimensions of the advanced technologies. This is an interactive framework that offers us a social construct and encourages lifelong learning. Also, people's constant, voluntary and self-motivated pursuit of knowledge; started to be provided by meta, immersive, and smart platforms. In this era of communication and learning technologies restructuring, the cultural digital texture is now called transhumanism beyond cyber. There are two main questions we must ask and answer as a person and as an institution nowadays: how our future will shape with transhumanism, and how transhumanism will affect ODL in the context of the cultural change. In this reference point, first, we must underline the basics of ODL in the 21st century. There are four main essentials in ODL in this era that we must understand and determine each of one's structure perfectly:

1. Next generation flexible learning
2. Transformation into a post-21st century person
3. Learning awareness, literacy, culture, and behavior
4. Social, environmental, and psychological presence and the interactions of each presence

These basic foundations of ODL mentioned above also lay the foundations for making ODL smart. When ODL has become smart, it also builds sound an ecosystem, and sustainable regional development to advocate the moral rights, ethics, and law globally. That is why Smart ODL (SODL) is concerned with how to use futuristic technologies and expand our capabilities and natural limits. In this case, SODL should integrate the following concepts into its structure (Figure 1). Thus, strategic planning of transhumanist transformations in both macro (institution and program) level, and micro (individual) level can be done in the restructuring of SODL.

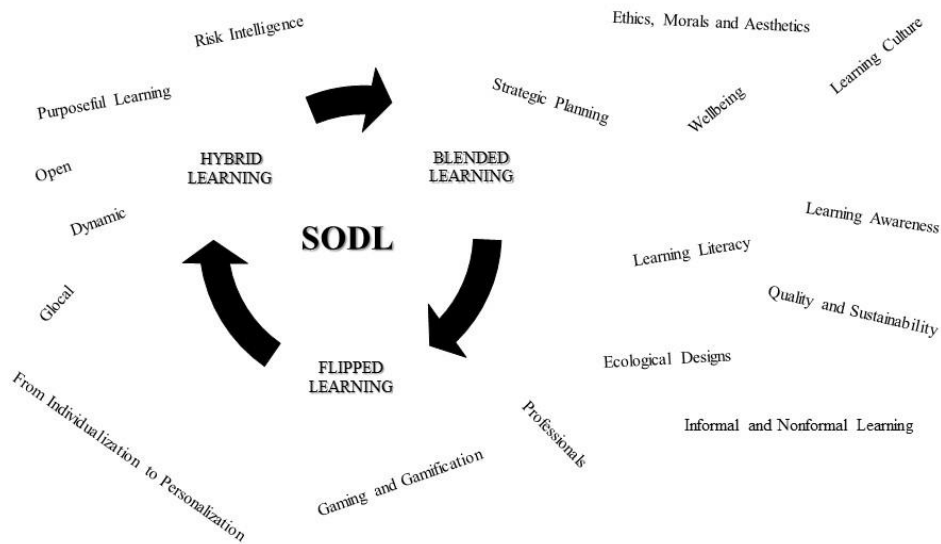


Figure 1: New Concepts in SODL

To summarize what has been discussed above, Smart Open and Distance Learning (SODL) supports Immersive Uber Learning with Meta Immersive Technologies, 3D and More Dimensional Learning, Learners Critical Thinking Skills, and Integrated Haute Couture Designed-Based Learning. With the “No Time No Walls” motto, SODL transhumans, who are humans are becoming robots, and robots are becoming humans. Before switching SODL, each person and institution must focus on a complex system covering with those areas:

- Blockchain Technologies
- Design Thinking
- Ethical and Legal Leadership
- Risk Intelligences
- Strategic Planning and Strategic Decision

Thus, SODL must support personal learning and learning organizations by using advanced approaches and allowing for slow, continuous, and gradual regional changes. SODL, moreover, can improve learning milieus in ecosystems that means improving the transhumans to transform beyond their regular limits. However, in this way, the capacity of SODL goes beyond an existing curriculum without worshipping technologies itself, and finally can be able to adapt to this transhumanist change in the 21st era.

2. Evolution of SODL

The emergence of Uber immersive learning promises to centralize and revolutionize SODL as a lifelong learning concept. SODL not only defines what hyper-immersive learning is in the transhumanist era, but also recognizes how they are currently being used and what their potential is. Therefore, SODL should describe a set of scenarios for using uber-intensive learning in an ecosystem and advocate the benefits of using uber-intensive learning to support regional development. Before focusing on those issues, we should review the evolution of SODL in history to understand the revolutionary developments in SDOL (Table 1).

The evolution of SODL shows us the changing lifestyles of individuals as well. Rapidly changing learning activities with new technologies, moreover, make the necessary changing scope, content, and design of learning. Based on those innovations create new skills, abilities and professionals who must constantly and regularly update themselves. Therefore, we have to focus on new formal learning (informal learning + non formal learning) to make our existence sustainable.

To summarize, SDOL transforms itself (Fig. 2.)

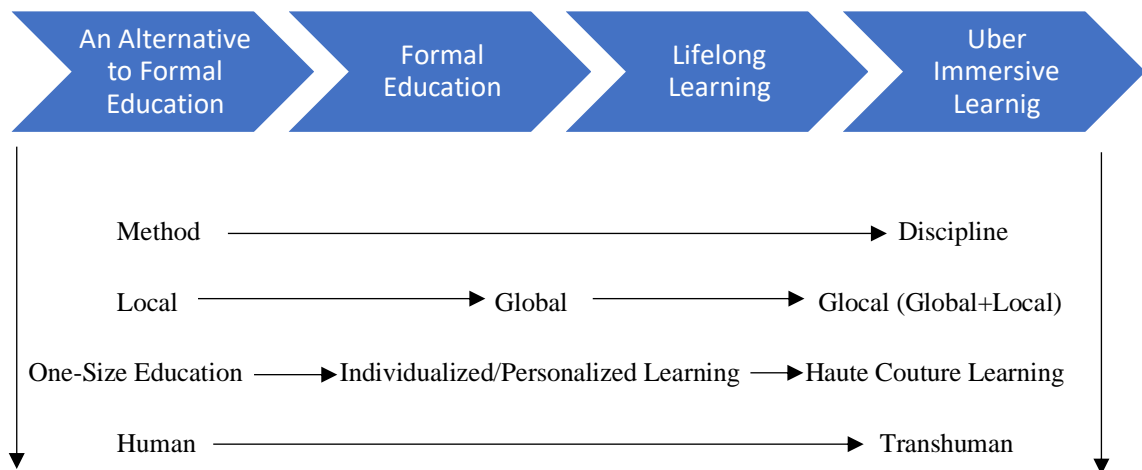


Figure 2: Summary of SODL Evaluation

The evaluation of SODL is a digital transformation in the transhumanist era. In this case, SODL must take credit from Learning Credit System, Risk Intelligence, Digital Leadership, Cybersecurity, Quantum Technologies, Augmented Literacy, Artificial Intelligence Driven Human Resources, Limited Resources, and Ethics & Law.

Table 1: The Evaluation of SODL

ODL 1.0 CORRESPONDENCE EDUCATION ERA 1728-1960	ODL 2.0 EDUCATIONAL RADIO AND TV ERA 1960-1985	ODL 3.0 COMPUTER-BASED TEACHING ERA 1985-2000	ODL 4.0 INTERNET-BASED LEARNING ERA 2000-2010	SODL 5.0 SMART OPEN AND DISTANCE LEARNING ERA (SODL) 2010-2020	ISODL 6.0 IMMERSIVE SMART OPEN AND DISTANCE LEARNING ERA (ISODL) 2020-2025	MISODL 7.0 META IMMERSIVE SMART OPEN AND DISTANCE LEARNING ERA (MISODL) 2025 - BEYOND
<ul style="list-style-type: none"> • Foundations <ul style="list-style-type: none"> • One Way Communication • Vocational Technical Education • Printed Materials • Philosophy <ul style="list-style-type: none"> • An Alternative to Formal Education • Method • Local • One-Size Education 	<ul style="list-style-type: none"> • Foundations <ul style="list-style-type: none"> • From One Way Communication to Two Way Communications • Vocational Technical Education • Multimedia • Telelearning • Philosophy <ul style="list-style-type: none"> • An Alternative to Formal Education • Method • Local • Individualized Learning 	<ul style="list-style-type: none"> • Foundations <ul style="list-style-type: none"> • From Two Way Communications to Multi Channel Communications • Vocational Technical Education • Bachelor Degree Completion Programs • Philosophy <ul style="list-style-type: none"> • Formal Learning • Open Education • From Method to Discipline • From Local to Global • Individualized Learning 	<ul style="list-style-type: none"> • Foundations <ul style="list-style-type: none"> • Multi Channel Communications • Mobile Learning • MOOCs • Philosophy <ul style="list-style-type: none"> • From Formal Learning to Lifelong Learning • Open and Flexible Learning • Second University • Discipline • Global • Personalized Learning 	<ul style="list-style-type: none"> • Foundations <ul style="list-style-type: none"> • Multi Dimensional Communications • Artificial Intelligence • Augmented Reality • Virtual Reality • Transhuman • Gamification • Mixed Reality • Philosophy <ul style="list-style-type: none"> • Lifelong Learning • Haute Couture Designed-Based Learning • Transhuman • Risk Intelligence • Strategic Planning • Glocal Learning 	<ul style="list-style-type: none"> • Foundations <ul style="list-style-type: none"> • Multi Dimensional Communications • Artificial Intelligence • Augmented Reality • Virtual Reality • Extended Reality • Transhuman • Mixed Reality • Blockchain • Simulated Consciousness • Clone Consciousness • Uploaded mind • Transferred Learning • Digital Memory • Information Transfer • Philosophy <ul style="list-style-type: none"> • Lifelong Learning • Haute Couture Designed-Based Learning • Transhuman • Risk Intelligence • Strategic Planning • Glocal Learning • Digital Transformation • Sustainable Human Transformation • Immersive Learning 	<ul style="list-style-type: none"> • Foundations <ul style="list-style-type: none"> • Artificial Intelligence • Machine Learning • Data Engineering • Programming Languages • Transhumans • Digital Twins • Neural Networks • Deep Mind • Meta Lives • Philosophy <ul style="list-style-type: none"> • Uber Immersive Learnig • Decentralizing <ul style="list-style-type: none"> • Trustworthy Environment • Data Reconciliation • Optimized Resources • <u>Humanchains</u> <ul style="list-style-type: none"> • Transaction Wisdom • Smart Contracts • Transparency

In the near future, humans will use smart implants, high-performance prostheses, memory-enhancing components, and "wearable" products to keep pace with the technology. As table 1, SDOL must get all humans ready for the new version of life with technological singularity. "The technological singularity is a hypothetical point, which technological growth becomes uncontrollable and irreversible, resulting in unforeseeable changes to human civilization" (Eden, Amnon, Moor, & James, 2012). Also, inventor and futurist Ray Kurzweil (2005) mentions "technological singularity describes his law of accelerating returns which predicts an exponential increase in technologies like computers, genetics, nanotechnology, robotics and artificial intelligence". Learning about technological singularity literacy to build collaborative teamwork that integrates and harmonizes with nature in SODL can be able to improve one's individual and professional quality as well as the quality of business processes and end product. SODL also must focus on developing national to universal education and learning policies, ensuring a quality life accreditation and assessment, and protecting the rights of institutions, working staff and learners.

SODL should provide lifelong learners with public health, nutrition awareness, diet information and wellness literacy, well as critical thinking, problem solving, reasoning, analysis, interpretation, synthesizing information. In the regional ecosystem, transhumans' research competencies and skills, enquiry practices, and inquisitiveness requires relativity, proficiency, curiosity, attention, imagination, innovation, and personal articulation. Moreover, tenacity, self-reliance, forethought, self-discipline, versatility, tactability, digital public discourse, and exposition, and listening skills are becoming extremely crucial for transhumans in SODL systems. Besides, leadership, team-synergy, relationship-building, cooperation and coordination, amenity management of virtual workspaces are the fundamental features of transformative SODL. Finally, multidimensional literacy skills are the essential life basics to involve in SODL-base activities (Kurubacak, Sisman-Ugur and Sharma, 2021):

- Civic, and Social-Justice Literacy
- Computer Programming and Computer Thinking Literacy
- Data Interpretation as Well Analysis and Synthesis Literacy
- Economic and Financial Literacy
- Ecosystems Literacy
- Entrepreneurialism-Based Literacy
- Environmental and Conservation Literacy
- Global Awareness Literacy
- Global Development Literacy
- Health Literacy
- Humanitarianism Literacy
- Information and Communication Technology (ICT) Literacy
- Law Literacy
- Media, Social Media, and Internet Literacy
- Multicultural Literacy
- Regional Development Literacy
- Scientific Thinking Literacy
- Transhumanist Literacy

SODL must evolve all stakeholders to transform beyond their natural limits with the literacy skills mentioned above. Therefore, the learners in SODL must have self- awareness by developing

secure, reliable, and mature lifestyles with high level empathy experiences. Also, a solid SODL system must support a digital wellbeing system to protect the personal data of transhumans, their digital rights, their records of health information and privacy risks. This digital wellbeing system must recognize where information and data that can be loaded into the transmissions are stored, simulate what transhumans can do with the information uploaded to them, and protect the personal data, and health information records of those lifelong learners. Therefore, a necessary security works should be started immediately to build a concrete foundation for the digital wellbeing by structuring interactive strategic decision models, establishing dynamic risk intelligences, utilizing dialogued blockchain technologies, and constructing solid ethical and legal leaderships.

3. The Integration Stages of SODL

There must be an integration strategy of each institution for utilizing SODL to support an ecosystem in a regional development. In order to keep SODL alive in an ecosystem in an academic context, each institution should carefully structure the following steps. While doing this, we should carefully answer the questions that should be asked at each step, together with the stakeholders. After that, the mission and vision of any SODL-based institution can be determined, and a strategic plan can be created accordingly.

I - Background Search Stage

1. Dreaming (What do we need? Why?)
2. Planning (How do we reach our goals?)
3. Exploring (What are the relevant trends and developments for the future?)

II – Design Stage

4. Preparing (What are the needs and main purpose of uber immersive learning?)
5. Determining (What is the framework for the uber immersive learning structure?)
6. Building (What are the most important elements, dimensions, and necessities?)
7. Orientating (What is the important question to be answered?)

III – Implementation Stage

8. Using (How do we draw conclusions from uber immersive learning?)
9. Monitoring (How do we observe that uber immersive learning is going to happen?)

IV – Evaluation Stage

10. Doing summative assessment (How do we evaluate educators learning at the end of a smart unit/units by comparing it against some standard)
11. Doing formative assessment (What are the ongoing process educators engage in focusing on lifelong learning goals?)
12. Taking new actions (How will we move closer to the goals?)

At each stage, it is important to build a sustainable network among the international and local partners as well as shape a collaborative and sustainable research network. While building a solid SODL system, the areas mentioned below must be recognized by the institutions to

- raise awareness about the use of new technologies in learning,
- map the potential partnerships in learning,
- understand the potential uses of new technologies among the societies,

- increase the capacity and readiness of the societies toward SODL,
- establish a dynamic needs assessment towards a glocal curriculum, and
- develop a prospective leadership in learning

Uber immersive learning has two meanings for SODL: First of all, the word uber shows learning in SODL that lifelong learners are being immersed into a virtual dialogue, such as virtual reality, augmented reality, mixed reality, metaverse, etc... Secondly, the word uber shows that SODL becomes more diversified, democratized, decentralized provided by blockchain technologies. Therefore, uber immersive learning in SODL provides a transparent, online, and secure ecosystem.

In the transition from traditional ODL to SODL, besides, the selection of technology, content creation, transparency towards stakeholders, the roles, and responsibilities of learners, and designing an environmentally friendly sustainable learning environment are among the most important issues for regional development.

In short, “the acceleration of radical transformational technological progress must be the central feature of SODL in the 21st century while we are on the edge of change comparable to the rise of human life on earth” (Ugur & Kurubacak, 2020).

Conclusions

New generation SODL creates smart people; smart people are foundation for smart cities and also smart societies. This brings changing lifestyles of individuals through shared transhumanist technologies that means

- rapidly changing learning activities with new technologies for open glocal governments
- the changing scope, content, and design of learning by utilizing energy-efficient technologies
- need of experts and professionals, who constantly update their skills and abilities
- the technical and social dimensions of technology taken together for time optimization
- new formal learning (informal learning + non formal learning) for green rooftops towards clean and green environment
- to make our existence sustainable by engaging lifelong learners through collaborative organizations

Building an ecosystem, digital societies provided by SODL in regional development must become more diversified, democratized, and decentralized in the transhumanist era for

- maintaining reputation, trust in certification, and proof of being smart societies
- focusing on relevance, employability, and transparency
- providing ongoing, voluntary, and self-motivated pursuit of knowledge
- offering a dynamic social construct
- encouraging lifelong learning
- understanding a need for online, distance and secure systems
- utilizing different immersive and learning platforms
- assessing citizens, and granting their lifelong learning certifications
- building the reflective practitioner
- enhancing the motivation and efficacy of transhumans
- building professional cultures

- meeting the needs of diverse learners
- taking informed action
- making progress on glocal priorities
- achieving success with performance-based reforms

As a final word, the following question should be asked: How should SODL ensure the process of change in any regional development, from digital transformation to human transformation, to create a sustainable ecosystem.

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