Distance Education: Prospects, Technologies and Challenges

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Abstract

Distance education (henceforth DE) has gained momentum and become famous all over the world. It has become a feasible solution to increase worldwide access to education. This study examines the main outlooks, prospects, technologies, and challenges facing DE in line with international best practices, as well as the need to expand the benefits and interests of many learners. To present an accurate view of these aspects in this study, 20 samples referring to these aspects were randomly selected from different authoritative international universities. Then, observation and testing have been conducted to answer the research questions. Many prospects are being achieved by applying such a system of education. Moreover, the researchers identify many technical devices that have been used in this area with their advantages and disadvantages. Challenges are the most influential concepts that affect the whole process, its usefulness: development and success.

Key words: Distance education, prospects, technology, challenges

التعلم عن بعد: الآفاق والتقنيات والتحديات

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الملخص :

اكتسب نمط التعليم عن بعد زخماً وأصبح مشهوراً في جميع أنحاء العالم. لقد أصبح بديلاً قابلاً للتطبيق لزيادة الوصول إلى التعليم على مستوى العالم. تماشياً مع أفضل الممارسات الدولية وبالنظر إلى الحاجة إلى توسيع نطاق فائدة واهتمامات عدد كبير من المتعلمين ، تهدف هذه الدراسة إلى مراجعة الآفاق والتقنيات والتحديات الرئيسية التي تمت مواجهتها في عملية التعليم عن بعد. و لتقديم رؤية دقيقة لهذه الجوانب في هذه الدراسة، تم اختيار ٢٠ عينة تشير إلى هذه الجوانب بشكل عشوائي من جامعات دولية موثوقة مختلفة. فضلا على ذلك تم إجراء المراقبة والاختبار للإجابة على أسئلة البحث. يتم تحقيق العديد من الآفاق من خلال تطبيق مثل هذا النظام التعليمي. تم ادراج استخدام العديد من الأجهزة التقنية في هذا المجال من قبا الباحثين مع مزاياها وعيوبها. التحديات هي المفاهيم الأكثر تأثيراً التي تؤثر على العملية برمتها ، وفائدتها: التطور والنجاح.

الكلمات المفتاحية: التعلم عن بعد ، آفاق ، التكنولوجيا ، التحديات

1. introduction

Nowadays, the invention and development of new teaching methods are currently supported by technologically-based learning using computers, websites, virtual universities, and virtual classes. In this scenario, the traditional style of education is ineffective due to the necessity to enhance knowledge, technology and skills (Haghani,2003). As a consequence, colleges can employ the virtual world in DE to develop innovative and efficient education techniques. Such systems that use the facilities of the virtual world can increase productivity, flexibility in time and place, and many other advantages, and this could be achieved by using many technologies and face the challenges that may be encountered.

2.Theoretical Background

DE is an instrument for extending educational opportunities to those who could not attend educational institutions whether full-time or part-time. Holmberg (1989:24) argues that "people prefer DE for the convenience, flexibility and adaptability of this mode of education to suit individual students' needs".

Moore (1991) describes DE as a teaching method in which teaching behaviour is isolated from the learning one. The student works in this way alone or in a group, led by study material. Students have the chance to contact a tutor using one or two more media, including telephone, TV, radio, etc. The function of teaching is shared, and the student can experience different study scenarios. Moore's DE definition emphasises three aspects: (i) the distinction between teaching and learning behaviour, (ii) the utilisation of technical means and (iii) the ability of two-way communication. According to him, a teacher's preparation is carried out apart from the students he teaches. Ohler (1991:22-23), on the other hand, emphasised two aspects of DE: "how it can change our approach to learning and how it can change us". He adds that "DE mainly has been raised due to learners' needs for lifelong learning."

In DE, the transaction occurs between teachers and learners in a unique environment that separates teachers from learners (Moore, 1993), also emphasised by Pathak (2003). Holmberg (1995) adds that learning is concerned with acquiring cognitive knowledge and cognitive skills. DE is built on individual learning activities

which is open to behaviour, cognition and other learning techniques. He adds that feelings of empathy and a sense of belongingness are central to the DE.

Mathews (2002) points out that DE technology has emerged as an essential feature of post-secondary education in the US. It would bring some profound changes to how people learn. DE is a growth field with the development and spread of the internet (Bailey, 2007). Dahl (2004) discusses various strategies to retain students in the system such as instructor's presence, grading student's assignments with constructive suggestions along with the use of some technique; devices, as pointed out by Hearnshaw (1999), such as instructional television, computers, audio/videotapes and CD-Rom which provide a collaborative environment and shape new learning and teaching environment.

White (2006) gives a critical study of the fields of distant learning and language teaching. It is considered that distance-language learning is designed to provide language learning chances that are technologically mediated. She keeps changing from material delivery to interactions between students, teachers and mother-tongues. She stresses the importance of the independent learner notion, but this can also be replaced by a collaborative learning community.

Wright et al. (2009) consider the language of instruction a challenging problem faced in DE. The instructors have the unique task of creating content and material accessible to learners speaking various languages. Countries like India, where several languages are spoken, face the unique challenge of creating content and materials that can be accessed by all students interested to learn through DE. In addition, lack of infrastructure, limited funds and non-availability of ITC equipment in remote villages

have been indicated as some of the hurdles developing nations face regarding the delivery of DE.

Işık et al. (2010) focus on distant learning attitudes among postgraduate students. A questionnaire and a demographic survey are used for the collection of data. The results of her study show that the attitude regarding distant learning is generally reasonable. The attitudes of female students compared with males are reported to be better. The experts claim that most students feel better at studying from a distance; however, some people have expressed reluctance during online work.

Discussing some of the obstacles to learning in DE mode, Visser (2012) opines that the DE approach does not work for all students, as some of them will require close in-person contact with the instructors, and some students may not be able to take up responsibility for their learning. However, it is essential to note that DE provides opportunities to gain knowledge, and the students can incorporate study around social and work patterns and take up a study on a full or part-time basis.

A student's attitude towards printed words in DE has been investigated by Rashid et al. (2013). They conclude that DE allows the student to study by means of the printed word and other technical instruments. They claim that the printed word itself gives genuine teaching and can be utilised as a replacement for the texts themselves.

Nsiah et al. (2015) believe that DE has become a platform for delivering education around the globe. DE provides anytime, anywhere forms of education and bridges the educational gap. In developing countries and emerging countries, the continued

expansion and success of DE depends on how many of the problems identified are handled because they depend on the quality of student learning experiences.

To sum up, all over the world, DE has gained momentum and become popular. It is a multidisciplinary field that has reacted to the many new technological changes over time. DE is a sort of indirect instructions conveyed via technical equipment. Although the challenges may be faced, it is an excellent method of reaching the learners in any place as it gives them the most outstanding possible control over time, place and pace of education.

3.Statement of the Problem

The transition to DE model can be found at many universities all over the world. Despite the opportunities revealed, there are hurdles to the transition and the eventual functioning of the online platform that threatens the viability of DE.

4.Research Questions

1. What are the main prospects obtained by applying the DE process?
2. Which technologies are primarily used in DE?
3. What are the main issues/ challenges facing the DE process?

5.Hypothesis

It is hypothesised that DE is a required field for investigation in which many advantages and strengths can be found by applying it in terms of prospects, and so many disadvantages and weaknesses may result in challenges and using technologies.

6.Aims

1. To find out the main prospects of using DE.
2. To detect the primary technologies used in DE.
3. To identify the major challenges in using DE.

7.Value of the Study

This study gives some hints about the nature of distance language courses: prospects, challenges and technologies. It is supposed to provide some insights on the nature of DE nature and process, including prospects, technologies and challenges.

8. Methodology

In this section, the researchers state the practical part of the current study. It involves data collection procedure, results and discussion of the results obtained about

prospects, technologies and challenges to answer the research questions which is supposed to verify the aims of the study.

8.1. Data Collection Procedure

The research data have been collected by observing 20 studies/samples conducted in the years between 2010 and 2017 about DE at high-level education in different authoritative universities, namely: Obafemi Awolowo University, Ondokuz Mayıs University, University of Nis, The Open University, Mustafa Kemal University, Balikesir University, Kazan Federal University, Sadhasivam Panchabakesan University, the University of Idaho, Oldenburg University, University of Malawi, and Kenyatta University. Then, the significant prospects, technologies and challenges faced have been specified and tested.

8.2. Results and Discussion

This section presents the results and discussion of the current study. It is divided into three parts, namely: prospects, technologies and challenges, which are listed numerically, and in a table for the technologies primarily used in the samples under investigation as follow:

8.2.1. Prospects

The main prospects specified as shown below:

1. DE is convenient: the convenience of online mode is drawn to a more substantial number of responses.

2. It can attract many learners with the removal of the barriers of time, space, and distance.

3. It is flexible that, unlike the strict old system, most students think that online study is adjustable.

4. It enables personalised adjustments. The teacher can adjust the curriculum to suit the educational needs of each student.

5. It allows teachings and learning to be conducted everywhere, everywhere, which is something convenient for students and teachers.

6. It facilitates further investigation of the interests of individuals. Teachers can construct interdependencies for students who are concerned in-depth with their self-interests.

7. It makes information available, and distance learning information is usually more up-to-date and supplied by the teacher.

8. It encourages interactive simulation, which is permitted. The activity for the contents covered is very interactive and may require simulations due to the absence of personal guidance.

9. It gives adequate feedback on all measures. Every student will have the same time.

10. It develops autonomy. Instead of being teacher-directed, learning is driven by the student.

11. It makes the classroom show all the students. Silent students can't escape from participation.

12. Small difficulties in disciplines mean less time devoted to things outside the lecture's topic.

13. It allows time to be used efficiently. Students and teachers are not spending time travelling.

As shown above, most of the prospects are related to the enormous audience potentiality, convenience, flexibility, accessibility, involvement and interest. Investigating many such prospects gives an evident push and a hopeful sight about the future development and success of applying DE at university.

8.2.2. Technologies

Table 1 below reflects the significant technologies specified in the samples tested of the current study:

Table 1: Major DE Technologies

Technology	Advantages	Disadvantages
Print	Materials Inexpensive Portable High comfort level Readily available	No interactions Limited sensory involvement Requires reading skills Time delay
Voicemail	Low cost Easy to use Increases interactions	Length may be limited No visual cues May involve toll charges
Audio files/CD	Inexpensive Easily accessible Easily duplicated	No visual cues No interaction
Audioconference	Inexpensive Easy to set up	No visual cues Requires hardware

E-mail	Flexible Interactive Convenient	Requires hardware Software variations
Online Chat	Real-time interactions Instant feedback	Requires similar software Must be scheduled Requires hardware
Web-based Education	May incorporate multimedia Worldwide access Interactive	Requires computer Requires Web access May be slow
Videotape/DVD	Inexpensive Easily accessible Easily duplicated Audio and visual elements	Complex to record No interaction Requires hardware

Satellite Videoconference	High realism May be interactive	Expensive hardware Must be scheduled Usually one-way only
Internet Videoconference	High realism May be interactive Relatively inexpensive	Must be scheduled Small windows It may be a slow, jerky video
Cable/Broadcast Television	Easy to use Easily accessible Maybe videotaped Includes audio and visual	High production costs Requires hardware No interaction Must be scheduled

Based on the above summary of the most technologies identified in this study, it is clear that using such technologies is important to help and develop the DE process.

However, there are some obstacles in using them that need to be overcome by all those involved, whether directly or indirectly, in the whole process of DE.

8.2.3. Challenges

According to the current study, the significant challenges identified in the samples under investigation are as follow:

1. When designing DE in higher education, there are no specific guidelines to follow. To create a foundation for DE development, it is essential to present well defined national DE policies.
2. 2. It has been seen more and more that an education model that delivers education without sacrificing quality is cost-effective.
3. Certain technical limitations hinder DE. Outside major cities, telephone and other communication facilities are insufficient.
4. The lack of a qualified professional framework to assist the application of DE is another problem. In an online context, few teachers know teaching without training.
5. One of the major issues still lies in access to connectivity. Students would have to use the web browsers Explorer or Netscape to send and get messages on computers. They should discover word processors and other apps on their computers to do necessary tasks.
6. Financial concerns are closely linked to these connectivity issues. Services in technology are costly. All these things demand funds that are not available to many individuals and companies.

7. DE itself encompasses more than just the transfer of knowledge and the cultural/social perspectives between and among the participants.

8. Every distance learning curriculum design must be responsive to diverse intercountry cultures.

9. There is no coherence in the implementation of the program/politics. It is known that the success of any education program depends on the involvement of all parties involved and the support of the financial agency .i.e. the government.

10. Without communication and technology, instruments (e-mail, fax, internet, television, radio, etc.) shed light on the problem of electricity that should be addressed and tackled.

11. Poor economic conditions and their effects on human resources at the middle level have discouraged a lot of learners due to the poor status of the country's economy.

12. Maintaining the standards of the traditional education system is one of the major issues. However, DE is typically the greatest alternative, particularly for students who do not meet the required entrance cut-off to the traditional university system.

13. The objective of the working class is to enhance its knowledge by means of refresher training that requires workers to live up to current social requirements in the usage of current technology.

14. Some students assume that online learning is unsuccessful and the quality of education is not comparable to that in traditional classes.

15. Due to a conflict of interests, there are conflicts between the DE Center responsible for organising all part-time programmes and the cognate departments that are

responsible for teaching. The two sides are generally working in distant relationships.

Most of the challenges are designing, technical, technological, attitudinal, and financial. Designing plan challenges are mainly in terms of clearly applicable, suitably cultural course plans to be used accordingly—technical problems related to the availability of technologists to supply faculty members with logistical support. Many teachers remain effectively using this technical equipment in the early phases. Attitudinal challenges include a widespread perception among faculty members, students, and the general public that DE is ineffective and that the quality of instruction is not comparable with that in live classes. Attitude issues include a broad view among teachers, students and the community of the ineffectiveness of the DE and the incomparability of the quality of education with that in traditional classes. Financial issues are one of the greatest problems; funding for various areas is necessary as selling technology such as Internet facilities and computer systems, both hardware and software; compensation to teachers and employees as well as equipment, building and resource centres. Last, the technological obstacles are another challenges that can be shown in terms of the low internet connectivity, which threatens the smooth running of an online project.

9.Conclusions

The globalisation of education has brought new opportunities for DE programs. Many countries around the world are adjusting and developing to keep up with the changing world in which communication is acknowledged to be at the heart of every system and every institution in society.

DE is a boon for many students, who find it difficult to attend regular classes due to varied reasons. Technology has compressed the world into a small server through which we can access anything from any place. It has undoubtedly made education very affordable and accessible. Especially in this era when there is a crunch of time when one wants to earn and learn, the distance mode emerges as a boon. It is undoubtedly a time saver for a serious student who wants to dedicate maximum time creatively and productively studying his subject. While this technology has given much to the sincere learner, it has taken away the personal touch between the teacher and the taught. Moreover, rapid changes in technology and globalisation and modernisation are creating new challenges in education. Like a regular mode of education, DE also has opportunities and challenges for students, teachers and institutions.

In a nutshell, it can be said that, after early suspicions, our observations are extremely encouraging, but we are conscious that we have to work a lot more to enhance our courses and change them in order to make better lectures. We assume that it is feasible to take a successful foreign language distant learning course by combining pedagogical insights and advanced technologies.

10.Suggestions for Further Studies

This study examines the significant prospects and challenges facing distance learning using technologies in higher education that are abysmal today in many authoritative universities worldwide. A more comprehensive study can be conducted by observing such a program of education in our country.

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