How are we ready for international distance education?

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Abstract. *In many countries the strategies for building information society (IS) have become prevalent. Slovenia has adopted a new strategy for the development of IS (in the framework of European IS). In IS (all types, forms and sorts), education has become very important; especially distance education (DE) which is supported by modern information and communication technology (ICT). This type of DE is known under the term e-learning, which has become an important characteristic of IS on the one hand and on the other hand an important (pre)condition on which future development of IS will rest on. Results from a survey about readiness for DE are presented.*

Keywords. Information society, distance education, e-learning, participants, participant's personal values, readiness for distance education.

1 Introduction

The issues about the creation and/or future development of IS have been getting a lot of worldwide attention from many different parties recently (e.g. researchers, European Union, USA, Japan) [4, 12, 18, 28, 36].

Societies around the globe are undergoing profound and rapid changes also as a result of the advancement and development in ICT [3, 14, 25]. These changes are evident in the economic, social, cultural and political aspects of society [3].

One among the most important changes in IS, especially due to the advancement in ICT, is also the radical change in the learning paradigm [17, 44]. In that frame, ICT has enabled a further evolution of DE [17, 29, 31], which has been in its very first form via traditional post. Nowadays, a great proportion of DE is ICT supported. This type and/or format of DE is known under the term e-learning.

DE represents a radical change in education process, since participants (e.g. teacher and learners) are not collocated (i.e. same time/same place) as they are in the traditional (face-to-face) education process [17, 30].

Besides traditional education (i.e. face-to-face) in IS, DE has become a widely accepted way for transferring knowledge from learning institutions (e.g. universities) to learners [16, 26].

Such a shift in learning paradigm has opened several issues concerned with a new format of learning [11, 23, 38]: assessment process, teacher-learner relationship, lack of face-to-face contact, materials and e-literature, the role of participants in DE, skills for using computers and participant's readiness for participation in DE process.

The future development of IS is importantly dependent on several factors (e.g. the level of development of a country) [27]. For the purpose of our discussion, and according to above presented starting point we assume that future development of IS will rest (also) on (lifelong) education. In that framework the future development of IS will also be importantly dependent on DE.

With the advent of IS and emergence of DE, participants have an opportunity to access different programs and courses around the globe. Therefore for the purpose of our discussion we consider DE in IS as international DE, since there are no place and time limits for participation in DE program around the globe nowadays [2].

Since IS is based on ICT [14], a precondition for DE, and in that frame for e-learning, is fulfilled. But on the other hand having a cutting edge technology for supporting e-learning process is not enough for success [23, 30].

Among several open issues in the problematic about DE, which importantly influence participants' success, we are focusing

on readiness for DE, since this issue has not been addressed and discussed very often in the literature [23, 24, 40].

For the purpose of our paper we will briefly highlight the development of the IS in the European Union and present state and contemporary initiatives in Slovenian IS. In the frame of the future development of IS we are focusing on DE which could be viewed as one among the most important ways of (future) lifelong education and also as a basis on which future development of IS will rest on. The paper provides an insight into the problematic of readiness of (potential) participants for DE and results of a survey about readiness for DE are discussed.

2 Information society

There is no generally accepted definition of IS. According to several authors the most common emphasis in the definition of IS is that remarkable innovations in ICT enable emergence of different facets of virtuality [5, 37]. In IS, various means of ICT (e.g. computers, telecommunication, internet) are widely used in order to facilitate communication and collaboration among different entities. In IS the creation, distribution and manipulation of information has become the most important and crucial economic and also cultural activity [6, 8, 14, 18, 36, 42]. Therefore IS has a great impact on social and organizational changes, due to the advancement in ICT.

Because of the global importance of IS, most of the states in the world have adopted strategies for improving the current state of IS (some also for formation) [3, 14, 35]. The formation process of IS is long lasting and never ending, since all societies tend to higher levels of IS [3, 4, 22].

European plans to build an IS emerged mainly as a reaction to Japanese and American initiatives (e.g. in 1993 USA accepted National Information Infrastructure Initiative), since European policies on ICT were lagging behind polices of its main global competitors [36]. There are also some suggestions that IS will be able to solve many contemporary problems that impede the lives of people and communities. Due to the increased importance, the concept of IS has become almost a prerequisite in every country [35] and prerequisite for future development of a country [3, 22].

On the other hand often emphasized open issue within the problematic of IS is the global problem of digital divide. This is especially obvious when we compare undeveloped and developed countries. However, there are also some significant gaps between different groups of citizens within the most advanced IS (i.e. Sweden) (e.g. access to internet varies between different groups of people) [4, 22, 25].

Europe's initiatives towards IS have become more significant in the beginning of 1990s [3]. From the early 1980s European Commission has developed a range of ICT policies and initiatives which form a political drive to develop European Information society [3, 9, 10, 15]. In that frame several plans and strategies were introduced [3, 15]: (1) Europe's Way to the Information Society – 1994; and (2) Europe at the Forefront of the Global Information Society.

In 2000 Lisbon strategy was set out by European Council, and their aim is to make Europe "the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion, and respect for the environment by 2010" [9]. Therefore the support for sustained development of IS in the European Union received wider recognition [22]. In that frame two action plans were developed [9, 22]: (1) The eEurope 2002 – was focused on issues about the price and promotion of internet usage and investments in people and knowledge; (2) The eEurope 2005 emphasized the need for setting up secure broadband infrastructure, promotion of e-business and public e-services. In 2005 the new initiative i2010 was issued. It defined the future framework for developing IS in the European Union. This initiative promotes open and digital economy and considers ICT as the engine for improving social inclusion, quality of live, economic growth and competitiveness [22].

Each European Union member country should define who will coordinate all the political, financial and regulatory aspects concerned with the development of IS [3]. In case of Slovenia, the Ministry of Higher Education, Science and Technology is charged with this responsibility [22]. Different countries have adopted different strategies towards (more improved) IS [14, 25].

From the above presented starting points is seen that the future development of a country is importantly dependent upon the state of IS. In that frame we assume that DE is an important

characteristic of DE (enabled by ICT) and on the other hand DE is one among the most important basis on which future development of a country will rest on.

In that context the established infrastructure (i.e. IS) is an important prerequisite for DE process and therefore for the future development of a county.

Therefore for the purpose of our paper we will provide an insight into the state and initiatives about the development of IS in Slovenia.

2.1 Information society in Slovenia

The latest Slovenian initiative for the creation of IS is based on i2010, which defines the future framework for development of IS in European Union until 2010. Therefore the new development strategy for IS in Slovenia until 2010 is known under the term "si2010" [22]. Its main purpose is to define the national framework for promoting the development of IS in Slovenia. In that frame, the initiative set development guidelines which take into consideration technological, social and legal frameworks. The main goal of this strategy is to increase innovation capacity and the competitiveness of Slovenian economy and society, the number of high value added jobs, the quality of life and balanced regional development [22]. The development of IS will also be importantly dependent on the state of transition Slovenian enterprises [27].

The state of IS in Slovenia ranks Slovenia alongside the European average. A comparison of indicators reveals that in certain areas Slovenia exceeds European average, but on the other hand in numerous areas Slovenia falls below the European average [9, 22].

By broad band access to internet Slovenia (40 %) is well above the EU average (20 %). The level of mobile telephony usage in Slovenia (90 cell phones per 100 inhabitants) ranks Slovenia among the top EU Member States (average is 87). Also 61 % of households have a computer and 54 % of households have access to the internet. These are some indicators where Slovenia exceeds the European average. But these indicators are not crucial from the point of view of the development of IS in the context of increasing innovative capacity (i.e. through the learning process) and competitiveness of Slovenian economy [22].

In the areas which could importantly influence and/or determine the future development and competitiveness of Slovenia, Slovenia falls below the European average [22]. The digital divide is quite large in terms of the regional, educational, economic and social aspects. Therefore some groups are cut off from transitioning into the IS. The use of ICT and internet in online business (business-to-business, business-to-consumer) is still in the initial stages of development (and use). There is substantial lack of individual e-shopping (only 12 % of population have been involved in such a way of shopping). In addition, some concerns about security, privacy, returning of goods and the delivery are often emphasized [22].

According to the above presented cognitions we can conclude that the current state of IS in Slovenia is not very favorable for the future development of DE for facilitating education, which is an important precondition in the process of approaching to economy based on knowledge.

Therefore we are focusing on DE, which could be considered as one among the most important driving forces for the future development of IS.

3 Distance education

In literature there are different definitions of DE, proposed by different authors [29, 31, 41]. Common to all proposed definitions of DE is that DE refers to any education in which the teacher and learners are not at the same place at the same time.

Some other definitions of DE, defines it as [19]: (1) Learning which is facilitated and supported with the use of modern ICT and computers; (2) Training and/or learning that takes palace via the web; (3) Learning that is facilitated by the use of digital tools and content; and (4) Education offered using electronic delivery methods (e.g. CD-ROMs).

DE has undergone several changes, especially due to the advancement in ICT and media which support DE [1, 7, 13, 16]. There are mainly three primary generations of DE [1, 2, 13, 16, 39, 43]: (1) 1st generation – printed material was delivered to the participant via the postal service; (2) 2nd generation – audio/video broadcast, later also with inexpensive audio/video recording (e.g. VHS); and (3) 3rd generation – DE is supported by modern ICT and is internet facilitated. This type is known under the term e-learning.

According to the above presented cognitions we can conclude that nowadays the term DE is

almost exclusively used for addressing DE which is ICT supported (i.e. e-learning). Some authors also use both terms interchangeably [1, 2].

For the purpose of our paper we use the term DE in order to take different manifestations and/or types of DE into account more holistically (e.g. print media, VHS, internet supported) since all of them require distance learning. Therefore in our discussion we use term DE, which mainly refers to DE which is supported by ICT (i.e. e-learning), but on the other hand as well to other DE types (e.g. print media via postal service).

DE process is importantly different from the traditional education process (e.g. physical distance, e-literature) [30]. Therefore needed and/or required participant's characteristics, which are crucial in traditional education (e.g. active listening, active collaboration), are not crucial anymore in DE.

In that frame we identify several important issues and/or areas which must be taken into consideration when determining participant's readiness for incorporation in DE process [23, 24, 30, 44]:

(1) Participant's attitudes towards distance education - since participants in DE process are not collocated (e.g. same time/same place) is important, that participants have interest and the will for participating in such a way of education. Therefore participant's attitudes towards distance education importantly determine participant's readiness for DE.

(2) Participant's level of skills and knowledge for working with modern ICT and computers – since DE process is supported (and based) on modern ICT, basic skills and knowledge for working with modern ICT and computers are almost pre-requisite for incorporation and success in DE process. Therefore participant's level of skills and knowledge for working with modern ICT and computers importantly influence (and also determine) participant's readiness for DE.

(3) Materials and literature used in DE process – a great proportion of materials and literature used in DE process are in electronic version (i.e. e-literature). E-literature could be defined as a digital object created on a computer and (usually) meant to be read on computer [20]. Printed e-literature and traditional literature (e.g. hard copy books) could not be considered as the same since there are many differences among them (e.g. structure of the text, chapters) [20]. Due to the mentioned differences some people could experience difficulties when using (e.g.

studying) e-literature besides and/or instead of traditional literature. Therefore participants with positive attitudes towards the usage of e-literature could be considered as more suitable for participation in DE process.

(4) Participant's personal values – a value is something that is regarded as desirable, worthy, right or as a belief [21, 32 ,33, 34]. Behavior and/or actions of a person are mainly guided and/or determined by this person's values [1973, 34]. Therefore it is important for the participant to have very positive attitudes towards the following values [23]: the usage of modern technologies, working from distance, self-discipline, responsibility and reliability. As a result, participants who have positive attitudes towards the selected personal values could be considered as more suitable for the participation in DE process.

We emphasized the selected important issues and/or areas which importantly influence participant's readiness for DE. For the purpose of our paper a survey among undergraduate students about DE has been conducted.

4 Participants readiness for DE

According to the above presented cognitions about IS and its state in Slovenia we can conclude that in Slovenia we have a relatively good IS infrastructure. Therefore an important precondition for DE is fulfilled, but it is not a guarantee for participants' success in DE process.

Therefore the issue about participant's readiness must be taken into consideration, due t its influence on participant's success in DE.

A research was conducted among undergraduate students of 2nd and 3rd year of study at University of Maribor, Faculty of Economics and Business. 155 questionnaires were completed and usable. The average age of participants was 21.6 years and 58.1 % of participants were females [24].

- The participants' level of skills and knowledge for working with modern ICT and computers – first we want to present some general findings from the research which will be the starting point for assessing participants' level of skills and knowledge for working with modern ICT and computers: (1) All 155 participants in the research have a computer at home; they use the internet for studying purposes and have at least one active e-mail address; (2) most of the students use computers everywhere

(e.g. at home, at public places, in library); (3) 98.1 % of students use portals for distance education; (4) 87.7 % of students are using student's forum. Students were asked to evaluate their knowledge and skills for working with computer and modern ICT, on Lickert's scale, from 0 (very poor) to 5 (excellent). 50.3 % of the asked students evaluate their knowledge and skills for working with computers and modern ICT as very good (with grade 4), 35 % as good (with grade 3) and 10.3 % as excellent (with grade 5). Therefore we can assume that students' knowledge and skills for working with computers and modern ICT are relatively good, because more than 95 % of student evaluate their knowledge and skills for working with computer and modern ICT as good or even better (as very good and excellent).

- Materials and literature used in e-learning process – another important issue is literature. Due to the nature of e-learning process the literature is mainly in electronic form (e.g. PDF format). Participants were asked if they would like to use e-literature instead of traditional literature (e.g. hard copy books, notes, etc.). 76 % of the asked participants are interested in using e-literature and the rest of them are more interested in traditional literature. Participants choose among 10 options what a good e-literature is. According to the findings from the research good and/or appropriate e-literature must be especially easy to use (36 %) and understandable to students (37 %). Less important characteristics are clearness of text (11%), good appearance (2 %), interactive test for reiteration (3 %), entertaining content (2 %), quotation of references for additional study literature (2 %), etc. Students were asked if they like to use multimedia (e.g. power point slides) instead of traditional materials (e.g. hard copy books). 84.5 % of students like to use multimedia instead of traditional materials. 15.5 % of students prefer traditional materials and literature. Students were asked if e-literature can replace traditional literature. 76.1 % of students think that appropriate designed e-literature can replace traditional literature. Students are also very in favor of using e-literature because 98.7 % of them believe that the use of e-literature (also) in the traditional education process will enrich it. Therefore we can assume, that majority of participants in the survey are willing to use e-literature and are therefore suitable for participation in e-learning process.

- Participants' personal values – we also find out (earlier in this chapter) that participants have a relatively high level of skills and knowledge for working with modern ICT and computers. Therefore we examined the importance of the usage of modern ICT. For 80 % of participants in the research, the usage of modern ICT (as a value) is important (grade 4) and very important (grade 5). None of the participants considered the usage of modern ICT (as a value) as not an important. The value – working from distance – which is discussed in the next paragraph, is important for the majority of the participants in the survey. Another among the selected set of participants' personal values is self-discipline - the participants were asked to evaluate the importance of self-discipline for them. Almost half of them (49 %) evaluated self-discipline as important (grade 4) and almost 20 % evaluated it as very important. Only a few (4 %) participants evaluated self-discipline as not important in their lives. Therefore we conclude that self-discipline is very important to the majority of students. Students were also asked to evaluate their attitudes towards responsibility and reliability. 47.7 % of participants considered responsibility and reliability as very important (grade 5) and 40.6 % considered it as important (grade 4). None of the participants considered responsibility and reliability as not important. Therefore it is seen that participants considered responsibility and reliability (as a value) as very important.

- Participants' attitudes towards distance education - the participants were asked if they were willing to participate in e-learning process (online class). More than 90 % of asked students are interested in e-learning. However, just asking question if someone is ready and/or interested in participating in e-learning process is a too simplistic approach (view). Therefore participants were asked about their attitudes towards distance studying, i.e. from home. Only 7 % of participants are very enthusiastic about distance studying from home (grade 5). On the other hand 5 % of the participants have very negative attitudes towards distance studying. The majority of the participants consider distance working (as a value) as important. 41 % participants evaluated it with grade 3 and 24.5 % participants with grade 4. We see that after asking a more precise question fewer students were very interested in the participation in e-learning process. We assume that participants are

quite interested in distance working (in general) and for distance studying.

It is important to emphasize that participants' personal values have an influence on other three factors which influence participants' readiness for e-learning. According to the conducted research we can conclude that an average participant in the survey is suitable for the incorporation in e-learning process.

5 Conclusion

The establishment of IS has become almost a prerequisite in many (especially high developed) societies as a starting point (and/or basis) for the future development of society.

In the process of building IS, DE has an important role, since DE could be considered as an important characteristic of IS, which provides foundations and/or the basis for the future development of the society. Due to the fact that nowadays DE is mainly ICT supported, established (and/or emerging) IS provides a necessary infrastructure for DE process. On the other hand an important issue is readiness of (potential) participants for incorporation in DE process. Therefore we emphasize several important issues which must be taken into consideration when assessing participants' readiness for DE.

According to results from the research, we can conclude that students are quite ready for incorporation into the DE process. In our discussion we take into consideration the following criterions: (1) Participant's attitudes towards distance education; (2) Participant's level of skills and knowledge for working with modern ICT and computers; (3) Materials and literature used in DE process; and (4) Participant's personal values.

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