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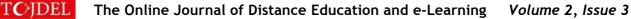
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Message from the Editors

TOJDEL welcomes you. TOJDEL also thanks all researchers, practitioners, administrators, educators, teachers, parents, and students from all around the world for visiting the volume2 and issue 2. TOJDEL has diffused successfully innovation on new development in distance education and e-learning around the World.

TOJDEL is a quarterly journal (January, April, July and October). This online periodical is devoted to the issues and applications of education. Reviewed by leaders in the field, this publication is designed to provide a multi-disciplinary forum to present and discuss all aspects of distance education and e-learning.

TOJDEL provides new developments in distance education forum and focal point for readers to share and exchange their experiences and knowledge each other to create better research experiences on distance education. The main purpose of this sharing and exchange should result in the growth of ideas and practical solutions that can contribute toward the improvement of distance education.

TOJDEL records its appreciation of the voluntary work by the following persons, who have acted as reviewers for one or more submissions to TOJDEL for v2i3. The reviewers of this issue are drawn quite widely from distance education field. Reviewers' interests and experiences match with the reviewed articles.

I am always honored to be the editor-in-chief of TOJDEL. Many persons gave their valuable contributions for this issue. I would like to thank the editorial board of this issue.

TOJDEL invites article contributions. Submitted articles should be about all aspects of distance education science. The articles should also discuss the perspectives of students, teachers, school administrators and communities. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJDEL. All authors can submit their manuscripts to aytekinisman@gmail.com for the next issues.

For any suggestions and comments on the international online journal TOJDEL, please do not hesitate to contact with us.

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The Potential For Integrating a Distance-Learning Initiative Into the Curriculum of a Saudi Female Private College

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ABSTRACT

Distance learning is a powerful source for providing education in developing countries. It tends to be an attractive option in countries where a rapidly-growing population is dispersed over a large geographical area. This is more or less the case in Saudi Arabia, which could benefit from maximising the use of existing physical and human resources whilst extending the geographical reach of education. This paper aims to investigate the potential for integrating a distancelearning initiative into the curriculum of Saudi female private colleges. The research used the survey and in-depth interviews as main source of gaining data. The paper revealed interesting findings such as time and travel constraints were at the top of the list of barriers for students. It has also emerged from the interviews that there were tentative plans to develop a distance learning curriculum in the future. There seems, however, concerns regarding the way distance learning qualifications are currently perceived by the Ministry of Higher Education in this country.

Keywords: e-learning, acceptance, postgraduate, Sri Lanka, Malaysia ,innovation attributes, psychological wellbeing

INTRODUCTION

The rate of population growth in Saudi Arabia is amongst the highest in the world. Whilst estimates in the literature vary, a review of seemingly reputable studies (e.g. Aart, 2004; FAO, 2004; UNDP, 2006) indicates that the annual population growth is around 3-4%. Moreover, it is estimated that almost half of the Saudi population is currently under the age of twenty years (Saudi Arabia Market Information Resource and Directory, 2007). Such an unprecedented population expansion and a desire on the part of the Government to increase the literacy rate have placed tremendous pressures on the country's educational system. Therefore, providing access to tertiary education as well as meeting the educational needs of a growing population of students are increasingly recognised as critical challenges that need to be addressed as matter of urgency (Saudi Ministry of Higher Education, 2008). Evidently, the use of distance learning (DL), particularly the recent application of internet-based learning, has been recognised around the world as a viable response to concerns related to increasing number of students, scarcity of available resources and hence limited access to education (e.g. Brown, 1999; Perraton, 2000). As will be highlighted in the literature review, the idea of DL is not something new to Saudi Arabia as there has been recent interest and subsequently several applications within the country. However, this mode of learning has never been provided in my college, i.e. Al-Ola College In line with BERA ethical guidelines, Al-Ola College is a pseudonym that was chosen in order to ensure anonymity). This is a private academic institution that was established in Saudi Arabia a decade ago with the aim of providing top-quality tertiary education exclusively for women. It would be thus of interest to learn why DL has not yet been considered in Al-Ola College, in spite of its potential attractiveness and effectiveness in catering for educational expansion and college improvement? Moreover, an in-depth examination is needed in order to explore what benefits/obstacles the integration of a DL initiative into the Al-Ola's curriculum could bring? In addition, how acceptable is DL in the Al-Ola College from the perspective of both students and the college? Finally, how suitable is web-based instruction (WBI) for delivering DL in Al-Ola College? It is reasoned that these questions should be applied to a new empirical initiative that utilises a large-scale survey of potential DL students, as well as in-depth interviews with the college's senior management.

Having briefly introduced the research context as well as the research questions, the following section draws on relevant literature before presenting the primary research.



LITERATURE REVIEW

Firstly, this review attempts to succinctly introduce the notion of DL along with its potential merits and drawbacks. Following this, there will be a critical review of previous studies and endeavours in the field of DL in Saudi Arabia.

1. The Concept of Distance Learning

DL is essentially a means of providing access to educational programmes for students who are separated by time and/or physical location from a tutor (Keegan, 1983, 1990; Moore and Kearsley, 1996). Perraton (2000) maintained that the idea of DL began in 1963; when Michael Young and Brian Jackson established the National Extension College as a pilot for an open university. Nevertheless, whilst the Open University was the world's first university to teach only at a distance, it appears that the basic idea - in the form of correspondence education - had been around since the first half of the 19th Century (Rowntree, 1992). Since then, the medium has changed from pencil and paper correspondence courses to real-time internet-based courses. Regardless of the medium, the application of open and DL has grown to a large-scale around the world due to several inherent advantages of DL. The work of Dodds et al. (1972) on the National Extension College, has highlighted three main advantages. The first one relates to its potential economic attractiveness as no lecture theatres are necessary and that college staff could be responsible for many times more students than they could ever accommodate in a conventional educational setting. Secondly, DL offers an opportunity for flexible and self-paced learning as people who have got jobs can study at their own convenience, without having to leave their jobs and/or devote themselves to full-time education. Thirdly, DL can operate over long distances, cater for widely scattered student bodies and hence has the ability to reach new audience who might suffer from time constraints. On the other hand, it should be noted that DL is not a panacea, and that its success depends on a range of factors. Based on research conducted by Dillon and Gunawardena (1995) and Leidner and Jarvenpaa (1993), three main success factors are critical for effective DL - technology, tutor characteristics and student characteristics. Firstly, with regard to technology, Lopez and Nagelhout (1995) suggested that reliability, quality, medium richness and cost are amongst the technical aspects to be considered. A central part of the medium's richness relates to interactivity. In this regard, it can be argued that one of the strengths of interactivity in an internetbased environment (i.e. WBI) is the ability to engage by providing rapid interaction and feedback to students. In addition, internet technology is seen as an efficient and cost-effective technology for delivering DL (McIntyre and Wolff, 1998). Indeed, the choice of technology is a crucial element when designing a DL course because it - along with other factors such as the number of learners involved - would determine the economic viability of DL vis-à-vis conventional education (Hawkes and Cambre, 2000; Rowntree, 1992; Rumble, 1993; Wagner, 1983). Bates (1995) proposed a somewhat comprehensive and useful framework, namely the ACTION model, for the selection of an appropriate technology for teaching. The acronym ACTION stands for access, cost, teaching/learning, interactivity and user-friendliness, organisational issues, novelty and speed. It could thus be of interest to examine empirically how suitable the WBI option (or internet technology) is for the case of Al-Ola College in terms of the theoretical ACTION framework. With regard to tutor characteristics, Collis (1995) argued that "it is not the technology but the instructional implementation of the technology that determines the effects on learning" (pg. 146). Webster and Hackley (1997) further explained that the characteristics that largely influence learning outcomes are the tutors' attitude towards technology as well as their control and knowledge of the technology as they are typically expected to develop and run the DL courses in an effective manner. Moreover, it appears that among the most common criticisms against DL is that students often feel isolated as they do not have the classroom environment in which they could interact with the tutor. Moreover, DL usually does not offer immediate feedback as the student has to wait for feedback until the tutor has reviewed his/her work and responded to it (Keegan, 1990; Serwatka, 1999). Nevertheless, advances in telecommunication technology, and internet-based applications in particular, has opened up the possibility of personal and group interaction in DL. Thus, specially-trained tutors with good control and knowledge of the WBI are more likely to be capable of exhibiting an interactive teaching style that encourages interaction between the DL students amongst themselves and with the tutor (Mitchell, 1993). A review of DL literature however reveals that amongst the reported obstacles that hinder tutors from participating in teaching online, DL include lack of support by the faculty, lack of scholarly respect in the areas of promotion and tenure, as well as unavailability of funds for training, setting, using and maintaining technology to support DL services (Baldwin, 2001; Lee, 2001; Northrup, 1997; Schifter, 2000; White and Weight, 2000). In this regard, Marrs (1995) argued that "without this [institutional] support, distance education is at risk of becoming a peripheral activity, without commitment from or significance to the institution" (pg. 21). Finally, with regard to student characteristics, it has been suggested that factors such as prior experience with DL, self-discipline and having a high-speed internet access at home affects students' attitudes towards WBI (Colley et al., 1994; Mills and Paul, 1993; Volery and Lord, 2000; Wood, 2002). Furthermore, Galusha (1999) and the Institute for Higher Education Policy (2000) report that some of the concerns that have been negatively affecting public perceptions with regard to DL concern the quality of students who enrol on DL courses, the quality of education provided in DL courses and the quality of DL graduates. The latter concern might be due to the fact that DL

may not be acknowledged by all employers.

2. Distance Learning in Saudi Arabia

Generally speaking, the demand for education in developing countries tends to be far greater than the resources providing it (Khan et al., 2001; Moore and Kearsley, 1996). Looking into the case of Saudi Arabia, Al Saif (2005) asserted that many Saudi universities face the problems of excessive enrolment and a lack of available facilities to accommodate such an increased demand for tertiary education. It is, therefore, reasonable to suggest that the DL option is one way of addressing problems stemming from the increased student enrolment. When looking into the history of internet diffusion in Saudi Arabia, it is noted that a widespread adoption of internet applications started in the late 1990s and that universities were among the first users of this technology (Al-Shawi and Al-Wabil, 2008). Another recent study has maintained that faculty staff in science-based disciplines (e.g. computer science, engineering, physical and medical sciences) have demonstrated higher internet usage when compared to staff in other academic disciplines (Al-Wabil et al., 2008). Apparently, an important issue for providing DL is the electronic connectivity of the institution with the outside world and with other participating universities (Lockwood, 1995). As all Saudi academic institutions are already interconnected and have links with the outside world via the internet, they can provide collaborative WBI programmes with minimal expenditure. Moreover, it should be noted that, for religious reasons, the Saudi educational system is a segregated one as the intermixing of genders is not allowed within most educational settings (Ali et al., 2003; Mirza, 2006). Saudi society is also a very conservative one in which women are not allowed to drive cars, and hence it is difficult for a single woman to travel on her own should she want to continue her education in another city (Al Rawaf and Simmons, 1991; Al Sudairy, 2007). Therefore, DL programmes - offered by Al-Ola College - might help Saudi women to pursue a higher education in the convenience of their own homes, in a way that does not conflict with the conservative and/or religious traditions of Saudi society. However, it is often mentioned that the Saudi educational system is not advancing sufficiently to match global standards in terms of information technology and the quality of education (Khan, 2000; Muysken and Nour, 2006). For example, recent studies by Al-Asmari (2005) and Al-Jarf (2007) on the current status of e-integration within Saudi higher education has concluded that the quantity and quality of offered online courses are inadequate when compared with global standards. Identified reasons for this include lack of funds, motivation, training, administrative support and infrastructure in Saudi universities. The almost non-accredited status of DL qualifications is another known barrier in Saudi Arabia (Ali et al., 2003). In May 2008 however, the Saudi Ministry of Higher Education set up the National Centre of E-learning and Distance Learning in order to oversee the change and prepare e-learning materials. Until now, nine Saudi universities out of a total of nineteen have already expressed interest in implementing the DL system, whilst most Saudi universities are expected to start providing WBI by the year 2009 (Abdul Ghafour, 2008). Al Sudairy (2007) also reported that the Ministry of Higher Education has recently signed a training contract with Meteor Malaysian Company in order to train a total of 130 academics on e-learning and on the construction of a DL curriculum. It is noted however that King Abdulaziz University has been a pioneer in experimenting with DL in Saudi Arabia since the 1980s (Al Rawaf and Simmons, 1991). This university has recently established the first Deanship of Distance Education in the country in order to run DL programmes - WBI in particular - for its students, most of whom live in remote areas and do not have any transportation to attend on-campus courses (King Abdulaziz University, 2008). Since the prospect of DL has not yet been considered by Al-Ola College, it could be argued that this research is a timely and highly relevant endeavour. With this in mind, the following section discusses the proposed methodologies to answer the aforementioned research questions, and thereby presents potentially new insights for the existing body of knowledge.

RESEARCH METHODOLOGY

The aim of this section is to highlight briefly the adopted research approach, as well as to provide a description and justification for the research design. Following this will be a discussion on the limitations of this research as well as some of the ethical issues that has arisen from this research.

1. Research Approach

The research strategy, whilst mixed, adopts a predominantly qualitative approach. According to a source at Oklahoma State University (2001), qualitative research is advantageous as it allows for an in-depth examination of situations in which complex questions are posed. With this in mind, the qualitative approach was thought to best fit the aim of investigating the prospect of DL in Saudi female colleges through examining the case of Al-Ola College. Notably, qualitative research typically uses a case study approach, meaning that data analysis focuses on one phenomenon, which the researcher has chosen to examine in depth, regardless of the number of sites, participants or documents involved in the study (McMillan & Schumacher, 1993). Case studies have been cited in the research methodology literature as an appropriate approach when the researcher has no control over events and is not able to manipulate relevant behaviour (Ragin & Becker, 1992). Whilst adopting a case study approach can yield a rich understanding of the context of the research and the processes to be studied (Morris & Wood, 1991; Yin, 2003), it is often criticised for its lack of generalisability (Scapens, 1990; Stake, 1995). Nevertheless, whilst the research findings



are expected to be of relevance and value to Al-Ola College, they may still be partially generalisable, as they might be relevant to other female academic institutions, especially those which operate in rapidly developing countries and/or in highly conservative societies like that of Saudi Arabian.

2. Research Design

In order to enhance the validity of this research, it was decided to use a variety of evidence, i.e. data triangulation (Miller & Brewer, 2003; Patton, 1990). Apparently, data triangulation is often considered as an important feature of an exemplary case study (Remenyi et al., 1998). For the purpose of this research, the main data collection methods were surveys of potential DL students and interviews with senior management; that were cross-checked with documentary evidence whenever possible. Whilst designing an effective survey could involve a great deal of time and effort, using surveys has many advantages when compared with interviewing. For instance, surveys are relatively cost-effective in providing access to a large sample, and they also provide a greater assurance of anonymity. In addition, they are relatively easy to administer, and the standardised terms facilitate the analysis process (Bailey, 1978; Saunders et al., 2003). Nevertheless, despite the various types of incentives applied by various survey researchers, participants often find little incentive to complete the survey, which eventually results in a low response rate. Out the various ways of administering surveys (e.g. telephone, online, mail, etc.), in-person surveys are likely to yield the highest response rate (Church, 1993; Robson, 2002; Singer et al., 2000). Therefore, a total of 380 in-person surveys were distributed and collected on the same day at a large annual event that was held at Al-Ola College on the 10th May, 2013. The event was attended by approximately 400 Saudi working and non-working women, as well as some of the college's current students, all of whom had completed their high-school education hence were considered as potential DL candidates. In addition to surveys, six members of the Al-Ola College's Board of Directors agreed to be interviewed on a face-to-face basis to discuss the prospect of integrating a DL initiative into the curriculum of the college. This research sample, which included the College Dean, is considered relevant because these individuals are in charge of setting the college's policy and making strategic decisions. As indicated earlier, gaining senior management's buy-in and back-up is a crucial success factor for any DL programme. It is interesting to note that only one of them had prior experience of DL as a former student. Unfortunately however, due to the research's time constraints and the fact that the data collection period coincided with the college's final examinations period, it was impossible to interview potential DL tutors. Although the in-depth interview approach is often claimed to be 'the best' qualitative method for gathering information (King, 2004), some argue that it can be time-consuming when compared with surveys (Easterby-Smith et al., 2001). For the purpose of this research, semi-structured in-depth interviews seem attractive in that they could ensure a focused approach yet offer flexibility in terms of modifying the questions to target new ideas raised by the interviewee. Additionally, it is believed that adopting a semi-structured approach would be beneficial in interviewing senior people with different backgrounds as well as varying views and knowledge of the subject (Robson, 2002; Thiëtart et al., 1999). With regard to data analysis, given the small number of interviews (six interviews with a total duration of approximately six hours), investment in terms of money, time or effort needed for using any qualitative analysis software was not feasible. Instead, the researcher analysed the results of the few interviews manually by identifying the similarities and differences between responses from interviewees. It is believed that by adopting this qualitative approach to data analysis, one could seek to relate the individual response to the 'big picture' set by the research questions (Hart, 2005).

3. Research Ethics

Certain themes addressed in the interviews may result in respondents wishing to avoid certain questions. In addition, the possibility exists that some respondents may provide the type of answers that they think the researcher may want to hear. Therefore, care was taken to encourage all interviewees to answer freely, where no specific answer was seen as being right or wrong. Moreover, it is imperative here to take into account and observe relevant ethical practices. Renzetti and Lee (1993) argued that investigators must ensure the anonymity of respondents, i.e. at the start of the interview, the interviewer needs to emphasise that the respondent's identity will not be divulged in the report. This will help to gain the respondent's confidence and increase the likelihood that they will express their views more openly. For the purpose of this report, pseudonyms (e.g. Interviewee A, Interviewee B, etc.) were used to ensure anonymity of the interviewees. Moreover, there were other ethical factors that could have invalidated the data collection and analysis. For example, fabrication, fraudulent materials and omissions are without doubt unethical, in addition to leading to a lack of internal or external validity (Briggs & Coleman, 2007). Among the factors that may limit the validity of the response of surveys' and interviews' participants are leading, poorly framed or over-complicated questions.

4. Research Limitations

Although every care was taken to limit various potential sources of bias, qualitative approaches are often regarded as being subjective endeavours that always carry with them the danger of bias (Bell, 2005). Perceptions with regards to DL were not measured by objective tests, which are often the focus of predominately quantitative-based

research. In addition, due to constraints associated with time and cost, it was impossible to use a large or more representative population sample. Apparently, case study research suffers from an inherent limited ability to generalise the findings due to small sample size. Borrowing from the assumptions of interpretive case studies, a small sample was selected in order to obtain in-depth information (Denzin & Lincoln, 2003; Travers, 2001). In spite of such constraints, the in-person survey and the few semi-structured interviews undertaken produced significant data, which are analysed and presented next.

RESEARCH FINDINGS

The aim of this section is present research findings that were derived from the surveys of potential DL students, followed by the results of the six interviews that were conducted with senior management. Next, the suitability of WBI for delivering DL in Al-Ola College is assessed using the ACTION methodology.

1. Survey Results

With the consent of the College Dean, a total of 380 in-person surveys were distributed in a major event which was attended by both Al-Ola College students and Saudi female outsiders. The issues raised in the survey questions were essentially derived from the literature which was reviewed in Section 2. With the exception of the first two open-ended introductory questions, the survey questions utilised 5-level Likert items (i.e. strongly disagree, disagree, neutral, agree, strongly agree). Prior to inviting respondents to fill in the survey a pilot test, in which two Academics of Al-Ola College were asked to fill in the survey in order to examine the level of clarity, was conducted. The questions were subsequently translated into Arabic, and the respondents had the choice of completing either the English or the Arabic version of the survey. For a copy of the survey in both languages. Out of the distributed 380 surveys, only 129 were completed and returned (i.e. a response rate of 34%). Based on the collected responses for the first two questions, Figure 1 illustrates the percentage split of the participants, according to their background. It was also interesting to note here that all participating students of Al-Ola College chose the English version of the survey. This might be due to the fact that the college's curriculum is exclusively taught in English, which is not entirely the case in other academic institutions in Saudi Arabia (Al-Kahtani et al., 2006).

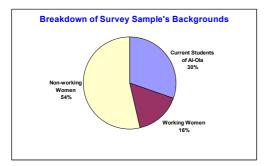


Figure 1: Backgrounds of Survey Sample

A detailed response analysis for the survey questions is provided in Appendix A. Generally speaking however, and despite the reported unpleasing non-accredited status of DL qualifications in Saudi Arabia, there seems to be a positive attitude towards DL on the part of the potential DL students surveyed. The vast majority of non-students at Al-Ola College have indicated a desire to continue their higher education, but among the biggest obstacles were time and travel constraints. Such findings, which render the DL option as attractive for the case of Saudi Arabia, are consistent with the findings of some of the previous studies (e.g. Al Rawaf and Simmons, 1991; Al Sudairy, 2007) that were reviewed in Section 2.1. It is interesting however to note that whilst 77% of the surveyed participants agreed that DL would mean less interaction with fellow students when compared with conventional education, approximately 60% of them were not actually very concerned about the actual presence of a tutor in a DL programme. The latter perception contradicts the mainstream DL literature (e.g. Cookson, 1989; Galusha, 1999; Keegan, 1990; Verduin and Clark, 1991) that suggests that a lack of immediate support and social interactions are the most common problems that face any DL setting. A probable reason is that such social isolation and alienation has recently been reduced with today's advanced use of communication technologies such as chat rooms, bulletin boards and conferencing.

2. Interview Results

For the semi-structured interviews schedule.. When asked about the reasons behind not incorporating DL into the curriculum of Al-Ola College, most of the interviewees indicated that this idea has already been hesitantly considered and that DL does not conflict in any way with the vision or values of the college. The latter finding was validated by a cross-checking of college's planning documents, which were made available for scrutiny by the College

Dean. Nonetheless, as bluntly argued by Interviewee C, "DL certificates are not well respected in the country. As soon as the male-run Ministry of Higher Education starts acknowledging such qualifications, we will offer them". Interviewee B, who also holds a senior position in that Ministry, mentioned that it is not a secret anymore that most respectable Saudi universities are in the process of incorporating DL into their curriculum. It was also interesting to note that the only female respondent, Interviewee E, was the only one who fully supported an immediate consideration of DL in Al-Ola College. She further suggested that one way of changing such a negative perception with regard to DL is to pay careful attention to the quality of the DL curriculum. Providing such courses are offered in collaboration with highly reputable international universities, this would also enhance the prospect of DL courses in Al-Ola College.

Regardless of the non-accredited status of DL qualifications, half of the interviewees thought that DL could advance knowledge and learning for housewives who missed – or are currently missing – the chance of full-time education. "Providing education for those housewives will provide tangible and intangible benefits for our college and for society as a whole", Interviewee A added. However, whilst housewives might not be very concerned with the qualifications themselves when compared with working women, interviewee F vigorously argued that since knowledge of the English language among potential DL students tends to be very limited, the Arabisation of computers and DL study materials should be encouraged. Al Sudairy (2007) mentioned that one of the problems that faces DL in Saudi Arabia is the language barrier. Since most tertiary education is undertaken in Arabic, most Saudi students lack fluency in English. On the other hand, almost all of interviewees strongly agreed that the college should not have any problem in raising the capital funding needed to set up and run DL. Whilst some training might be needed to train staff in DL course development and technology, they seemed confident that most of the necessary technological structure and technical knowledge are already available in-house. Therefore, the vast majority of the members of the Board of Directors interviewed indicated their readiness to support the idea if they found a sufficient market for it. What came as a surprise to all of them were the results of the survey. In particular, they were amazed by how well perceived was DL by those who could be regarded as potential DL students. As promised by Interviewee A, "since you found such an immense interest, DL will surely be on the top of our agenda at the next meeting". In essence, it was pleasing to witness that one of the outcomes of this research endeavour was actually initiating a constructive discussion, and hopefully action, with regard to implementing a DL curriculum.

3. The Suitability of Internet Technology

Having investigated the potential of DL in Al-Ola College, it is now appropriate to examine the viability of WBI, i.e. internet-based learning as the technology of choice to deliver DL programmes in Al-Ola College. With aid of both primary and secondary sources of information, the outcomes of this assessment is summarised below through using ACTION methodology, which was introduced on page 3.

Table 1: Assessing the Suitability of WBI in terms of ACTION Framework

| Access | Based on the response to question 7 of the survey, the overwhelming majority of respondents have confirmed their access to the internet via a broadband connection. | |
|-----------------------------------|---|--|
| Cost | Simplified cost analysis was conducted to determine the typical cost structure of WBI as well as the unit cost per learner. Whilst the members of the Board of Director interviewed have asserted that financial issues are not of great importance should A Ola College decide to set up DL courses, these calculations confirmed the economic attractiveness of WBI for both the college and for DL students. | |
| Teaching and Learning | Many scholars (e.g. Baldwin, 2001; Collis, 1995; Webster and Hackley, 1997) have suggested that the success of any DL initiative largely depends on the tutors' preparation and training. Confidence has however become apparent - from the interviews — with regard to the technical ability and knowledge of staff working at Al-Ola College. There also seems to be a positive attitude towards the use of computer and internet-based application as the interviewees believed that the use of information technologies, in general, has already resulted in improvement in the curriculum development and teaching methods in the college. A couple of the interviewees have also shown results of internal studies that confirm this last suggestion. | |
| Interactivity and user-friendless | Moore and Kearsley (1996) pointed out three types of interaction: learner-content, learner-tutor and learner-learner. Clearly, WBI could provide for all of them through the use of online conferencing, chat rooms, emails and bulletin boards. Whilst the | |

| | language barrier may form an obstacle for students who lack fluency in English, Interviewee F spoke about some of the successful attempts to provide online DL programmes that are run in Arabic in Egypt. Although one of the interviewees was not quite satisfied with the current skills of students using the internet, it is perhaps worth mentioning here that most of the potential DL students surveyed have indicated their competence in using internet applications and there appears to be a perception among the whole population that they should improve their computer skills and internet literacy. | |
|-----------------------|--|--|
| Organisational issues | When the interviewees were asked whether or not they can think of any organisational changes that would need to be made before a DL initiative could be applied in Al-Ola College, most of them were certain that it could be done with minimal effort given the available financial and technical resources of the college. Moreover, they asserted - and this is supported by documentary evidence - that providing DL does not conflict in any way with the vision or values of Al-Ola College. | |
| Novelty | As indicated earlier, the use of WBI is not something new to Saudi Arabia. The use of the internet, in general, is very appealing to most Saudis, and its popularity - among student and academics in particular - is growing by the day (Al-Kahtani et al., 2006). In fact, as argued by Interviewee B "since our college is electronically connected with other Saudi institutions and with the outside world, there is a prospect of collaboration in the DL field". | |
| Speed | Speed is indeed one of the major benefits of the internet. It is easy to mount and up-date WBI study materials and to set up instant communication between tutors and students. | |

Evidently, from the above assessment, WBI seems to be an attractive choice for delivering DL programmes on the part of Al-Ola College. This finding agrees with that of another study by Sahab (2003), which examined the potential of WBI in another Saudi university.

CONCLUSION

In conclusion, in this country, religious and cultural traditions also dictate segregation of the sexes in almost all situations, including educational settings. DL might therefore help normal Saudi women to pursue further education in the convenience of their own homes, without imposing a burden on their male relatives who would otherwise have to drive them to female colleges. For these reasons, a review of the literature has revealed that DL has recently generated a growing interest in the country. This research was therefore launched in order to examine the potential of incorporating DL into the curriculum of Al-Ola College. In order to boost the validity of this research, triangulation of evidence was adopted; i.e. survey of potential DL students and interviews with senior management; that were then cross-checked with available documents.

The results of the surveys have shown a tremendous interest in DL. Time and travel constraints were at the top of the list of barriers that have prevented the respondents from pursuing further education. It should be noted however that not only were the surveyed participants not representative of the Saudi population, but they also represent the views of Saudi females only. A sample of male students might therefore have presented different attitudes. In addition, such views might not be utterly appreciated by policy makers in Saudi Arabia, who are largely males. Nonetheless, efforts noted recently - such as the establishment of the National Centre of E-learning and Distance Learning - indicate a determination to expand the role of DL in the country for reasons mainly related to catering for the expansion of student enrolment (cf. Al Saif, 2005). It has also emerged from the interviews that there were tentative plans to develop a DL curriculum at Al-Ola College in the future. There seems, however, concerns regarding the way DL qualifications are currently perceived by the Ministry of Higher Education and by the people who might downplay the prospect of DL. Another concern is the language barrier as the English language is not mastered by all potential DL candidates. These concerns could however be overcome, as suggested by the interviewees, by raising the quality of the DL curriculum offered and by boosting efforts to Arabise computers and DL study materials. With regards to the most suitable DL medium for the case of Al-Ola College, and as per the ACTION framework, WBI appears to be a very attractive option to consider. As a review of the literature (e.g. Baldwin, 2001; Collis, 1995; Keegan, 1990; Northrup, 1997) indicates, positive tutors' characteristics and support (particularly financial support) from senior management are among the most significant factors for the success of any DL initiative. This research has

verified the presence of such factors in Al-Ola College. With the positive perception with regard to DL that this research has also demonstrated, it is hoped that the subject of DL will be seriously considered by the Board of Directors and subsequently incorporated into the curriculum of the college.

Finally, recommendations for future research in Al-Ola College include an investigation into which majors are feasible and/or worthwhile to offer on a DL basis. Moreover, one could argue that the aforementioned research limitations regarding the lack of generalisability could actually provide future research opportunities. For instance, it could be of interest to take the findings of this research and try to test them quantitatively on a representative set of academic institutions. In addition, since DL has already been offered in other Saudi universities, an empirical examination of such experiences and learnt lessons could prove beneficial.

REFERENCES

Aarts, P. (2004). The internal and the external: the house of Saud's resilience explained. European University Institute, Florence. Robert Schuman Centre for Advanced Studies Working Paper No. 2004/33.

Abdul Ghafour, P.K. (2008). *Most Saudi universities switch to E-learning by 2009* [WWW]. Science Development Network Website. Available from: http://www.sciencedev.net/fe/Article.aspx?Aid=725 [accessed 01 June 2008].

Al-Asmari, A.M. (2005). The use of the internet among EFL teachers at the colleges of technology in Saudi Arabia. Unpublished Ph.D. thesis: Ohio State University.

Ali, S.H., Sait, S.M. and Al-Tawil, K.M. (2003). *Perceptions about eLearning in Saudi Arabia*. In ICASE World Conference on Science & Technology Education. Penang, April 2003.

Al-Jarf, R.S. (2007). *E-integration challenges for reactors and deans in higher education institutions in Saudi Arabia*. In Computer and Advanced Technology in Education. Beijing, 8-10 October 2007.

Al-Kahtani, N., Ryan, J. and Jefferson, T. (2006). *How Saudi female faculty perceive internet technology usage and potential*. Information, Knowledge, System Management, Vol. 5, no. 6, pp. 227-243.

Al Rawaf, H.S. and Simmons, C. (1991). *The education of women in Saudi Arabia*. Comparative Education, Vol. 27, no. 3, pp. 287-295.

Al Saif, A.A. (2005). The motivating and inhibiting factors affecting the use of web-based instruction at the University of Qassim in Saudi Arabia. Unpublished Ph.D. thesis: Wayne State University.

Al-Shawi, A., Al-Wabil, A. (2008). Internet usage by faculty in Saudi higher education. In the 2nd National Information Technology Symposium. Riyadh, May 2008.

Al Sudairy, H. (2007). *The impact and influential factors of globalization on the Saudi higher educational system*. In UNESCO Regional Research Seminar for Arab States. Rabat, 24-25 May 2007.

Al-Wabil, A., Alshawi, A., Alshankity, Z., Al-Wehaibi, K. and Al-Wehaibi, B. (2008). *Internet utilization by faculty in Saudi Arabian universities: differences based on academic discipline*. In International Technology, Education and Development Conference. Valencia, March 2008.

Bailey, K.D. (1978). Methods of social research. London: Collier Macmillan Publishers.

Baldwin, R.G. (2001). *Technology's impact on faculty life and work*. In *Distance education: teaching and learning in higher education*, Foster, B., Bower, B. and Watson, L. (Eds.). Boston: Pearson Custom Publishing.

Bartolic-Zlomislic, S. and Bates, A.W.(Tony). (1999). *Investing in online learning: potential benefits and limitations*. Canadian Journal of Communication, Vol. 24, no. 3, pp. 349-366.

Bell, J. (2005). *Doing your research project: a guide for first time researchers in education, health and social science*. 4th edition, London: McGraw-Hill.

Briggs, A.R.J. and Coleman, M. (2007). *Research methods in educational leadership and management*. 2nd edition, London: Sage Publications Ltd.

Brown, S. (1999). Open and distance learning: case studies from industry and education. London: Routledge.

Church, A.H. (1993). *Estimating the effect of incentives on mail survey response rate: a meta-analysis*. The Public Opinion Quarterly, Vol. 57, no. 1, pp. 62-79.

Collis, B. (1995). *Anticipating the impact of multimedia in education: lessons from the literature*. Computers in Adult Education and Training, Vol. 2, no. 2, pp. 136-149.

- Cookson, P. (1989). *Research in learners and learning in distance education: a review*. American Journal of Distance Education, Vol. 3, no. 2, pp. 22-34.
- Denzin, N.K. and Lincoln, Y.S. (Eds.). (2003). *Strategies of qualitative inquiry*. 2nd edition, London: Sage Publications Ltd.
- Dillon, C.L. and Gunawardena, C.N. (1995). A framework for the evaluation of telecommunications-based distance education. In Selected papers from the 17th Congress of the International Council for Distance Education, Stewart, D. (Ed.). Milton Keynes: Open University.
- Dodds, T., Perraton, H. and Young, M. (1972). *One year's work: the international extension college 1971-1972*. Cambridge: International Extension College.
- Easterby-Smith, M., Thorpe, R. and Lowe, A., (2001). *Management research: an introduction*. 2nd edition, London: Sage Publication Ltd.
- FAO (2004). FAO database collections 'FAOSTAT 2004' [WWW]. Food and Agricultural Organisation of the United Nations Website. Available from: http://faostat.fao.org/ faostat/collections?version=ext&hasbulk=0 [accessed 14 May 2008].
- Galusha, J.M. (1999). *Barriers to learning in Distance Education* [WWW]. University of Southern Mississippi Website. Available from: http://www.infrastruction.com/barriers.htm [accessed 7 June 2008].
 - Hart, C., (2005). Doing your Masters dissertation. London: SAGE Publications Ltd.
- Hawkes, M. and Cambre, M. (2000). *Cost factor: when is interactive distance technology justifiable?*. The Journal: Technological Horizons in Education, Vol. 28, no. 1, pp. 27-32.
- Institute for Higher Education Policy (2000). *Quality on the line: benchmarks for success in internet-based distance education*. Washington D.C.: The Institute for Higher Education Policy.
- Keegan, D. (1983). *On defining distance education*. In *Distance education: international perspective*, Sewart, D., Keegan, D. and Holmberg, B. (Eds.). London: Croom Helm.
 - Keegan, D. (1990). Foundations of distance education. 2nd edition, London: Routledge.
- Khan, J.A., Khan, S.A. and Al-Abaji, R.H. (2001). *Prospects of distance education in developing countries*. In Millennium Dawn in Training and Continuing Education. Bahrain, 24-26 April 2001.
- Khan, S.A., Shazli, S., Khan, J.A. and Sait, S.M. (2000). *Distance education and its prospects in Saudi Arabia*. In First Saudi Technical Conference and Exhibition. Riyadh, November 2000.
- King, N. (2004). Using interviews in qualitative research. In Essential guide to qualitative methods in organizational research, Cassell, C. and Symon, G. (Eds.). London: Sage Publications Ltd.
- King Abdulaziz University (2008). *Deanship of Distance Learning: Frequently asked questions* [WWW]. King Abdulaziz University Website. Available from: http://www.kau.edu.sa/faq_view.aspx?Site_ID=214&Lng=AR [accessed 3 May 2008].
- Lee, J. (2001). *Instructional support for distance education and faculty motivation, commitment, satisfaction*. British Journal of Educational Technology, Vol. 32, no. 2, pp. 153-160.
- Leidner, D.E. and Jarvenpaa, S.L. (1993). *The information age confronts education: case studies on electronic classroom*. Information Systems Research, Vol. 1, no. 4, pp. 24-54.
 - Lockwood, F. (1995). Open and distance learning today. London: Routledge.
- Lopez, E.S. and Nagelhout, E. (1995). *Building a model for distance collaboration in the computer-assisted business communication classroom.* Business Communication Quarterly, Vol. 58, no. 2, pp. 15-22.
- Marrs, L. (1995). *An analysis of distance education and educational technology*. Bellingham, Washington: Western Washington University.
 - Miller, R.L. and Brewer, J.D. (Eds.). (2003). The A-Z of social research. London: Sage Publications Ltd.
- Mirza, A. (2006). Utilizing distance learning technologies to deliver courses in a segregated educational environments. In Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications, Montgomerie, C. and Seale, J. (Eds.). Chesapeake, AACE.

Mitchell, I. (1993). Academic education of distance educators. In Distance education: new perspectives, Harry, K., John, M. and Keegan, D. (Eds.). London: Routledge.

McIntyre, D.R. and Wolff, F.G. (1998). *An experiment with WWW interactive learning in university education*. Computers & Education, Vol. 31, no. 3, pp. 255-264.

McMillan, J.H. and Schumacher, S. (1993). *Research education: a conceptual introduction*. 3rd edition, New York: Harper Collins.

Mills, R. and Paul, R. (1993). Putting the student first: management for quality in distance education. In *Reforming open and distance education: critical reflections from practice*, Evans, T. and Nation, D. (Eds.). London: Kogan Page.

Moore, M. and Kearsley, G. (1996). *Distance education: a systems view*. London: Wadsworth Publishing Company.

Morris, T. and Wood, S. (1991). *Testing the survey method: continuity and change in British industrial relations*. Work Employment and Society, Vol. 5, no. 2, pp. 259-282.

Muysken, J. and Nour, S. (2006). *Deficiencies in education and poor prospects for economic growth in the Gulf Countries*. Journal of Development Studies, Vol. 42, no. 6, pp. 957-980.

Northrup, P.T. (1997). Faculty perceptions of distance education: factors influencing utilization. International Journal of Educational Telecommunications, Vol. 3, no. 4, pp. 343-358.

Oklahoma State University (2001). *Qualitative research* [WWW]. Oklahoma State University Website. Available from: http://www.okstate.edu/ag/agedcm4h/academic/ aged5980a/5980/qualrsch/QUALRSCH/sld001.htm [accessed 5 January 2008].

Patton, M.Q. (1990). Qualitative evaluation and research methods. 2nd edition, London: Sage Publications Ltd.

Perraton, H. (2000). Open and distance learning in developing world. London: Routledge.

Ragin, C.C. and Becker, H.S. (1992). What is a case? Exploring the foundations of social enquiry. Cambridge: Cambridge University Press.

Remenyi, D., Williams, B., Money, A. and Swartz, E. (1998). *Doing research in business and management: an introduction to process and method*. London: Sage Publications Ltd.

Renzetti, C.M. and Lee, R.M., (1993). Researching sensitive topics. London: Sage Publications Ltd.

Robson, C. (2002). Real world research. 2nd edition, Oxford: Blackwell Science Ltd.

Rowntree, D. (1992). Exploring open and distance learning. London: Kogan Page Ltd.

Rubmle, G. (1993). *The economics of mass distance education*. In *Distance education: new perspectives*, Harry, K., John, M. and Keegan, D. (Eds.). London: Routledge.

Rumble, G. (1997). The costs and economics of open and distance learning. London: Routledge.

Rumble, G. (2004). *Papers and debates on the economics and costs of distance and online learning*. Oldenburg: Carl von Ossietzky Universitat.

Sahab, S. (2003). *Initiating distance education programs in Saudi Arabia using networked learning technology*. In the ODLAA (Open and Distance Learning Association of Australia) Biennial Forum. Canberra, 1-4 October 2003.

Saudi Arabia Market Information Resource and Directory (2007). *Saudi Arabia: population* [WWW]. Saudi Arabia Market Information Resource and Directory Website. Available from: http://www.saudinf.com/main/a4.htm [accessed 31 March 2008].

Saudi Ministry of Higher Education (2008). *Saudi universities* [WWW]. Saudi Ministry of Higher Education Website. Available from: http://www.mohe.gov.sa/Arabic/Universities/ Pages/default2.aspx [accessed 2 June 2008].

Saunders, M., Lewis, P. and Thornhill, A., (2003). *Research methods for business students*. 3rd edition, London: Pearson Education Ltd.

Scapens, R.W. (1990). *Researching management accounting practice: the role of case study methods*. British Journal Review, Vol. 22, no. 3, pp. 259-281.

Schifter, C.C. (2000). Faculty motivators and inhibitors for participation in distance education. Education Technology, Vol. 40, no. 2, pp. 43-46.

Serwatka, J.A. (1999). *Internet distance learning: how do I put my course on the web?*. The Journal: Technological Horizons in Education, Vol. 26, no. 10, pp. 71-75.

Singer, E., Van Hoewyk, J. and Maher, M.P. (2000). *Experiments with interviews in telephone surveys*. The Public Opinion Quarterly, Vol. 64, no. 2, pp. 171-188.

Stake, R.E. (1995). The art of case study research. London: Sage Publications Ltd.

Thiětart, R-A. et al. (1999). *Doing management research: a comprehensive guide*. London: Sage Publications Ltd.

Travers, M. (2001). Qualitative research through case studies. London: Sage Publications Ltd.

United Nations Development Programme 'UNDP' (2006). *Human development report: beyond scarcity: power, poverty and the global water crisis*. Basingstoke: Palgrave Macmillan.

Verduin, J. and Clark, T. (1991). *Distance education: the foundations of effective practice*. San Francisco: Jossey-Bass Publishers.

Volery, T. and Lord, D. (2000). *Critical success factors in online education*. The International Journal of Educational Management, Vol. 14, no. 5, pp. 216-223.

Wagner, L. (1983). *The economics of the Open University revisited*. In *Distance education: international perspective*, Sewart, D., Keegan, D. and Holmberg, B. (Eds.). London: Croom Helm.

Webster, J. and Hackley, P. (1997). *Teaching effectiveness in technology-mediated distance learning*. Academy of Management Journal, Vol. 40, no. 6, pp. 1282-1309.

White, K.W. and Weight, B.H. (2000). The online teaching guide. Boston: Allyn & Bacon.

Wood, H. (2002). *Designing study materials for distance students* [WWW]. Charles Sturt University Website. Available from: http://www.csu.edu.au/division/oli/olird/occpap17/design.htm [accessed 12 April 2008].

Yin, R.K. (2003). Case study research: design and methods. 3rd edition, London: Sage Publications Ltd.



The Use of Modern Mobile Platforms For Improving Quality of E-Learning Processes in Higher Education

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ABSTRACT

During the past three years, the number of mobile broadband Internet users has surpassed the number of fixed broadband network subscribers. This change of global network access, shows that the mobile phone is one of the most frequent ways by which people are using broadband services. Mobile phones are used mostly by massive young population, which includes students. It is estimated that by 2016. mobile Internet use will significantly surpass fixed Internet. This change provides new features and benefits that are explored in this paper. New generation of mobile smart phones, based on various OS platforms, are very efficient education tools. In this paper we analized the students ability of using smart phones in learning process, through the case study, where students took part in e-learning process by implementing data in given or new smart phone applications, with the aim of improving overall quality of higher education.

Keywords: mobile platforms, smart phones, android, e-learning

INTRODUCTION

According to International Telecommunication Union (ITU) estimates, there will be 6.8 billion mobile-cellular subscriptions by the end of 2013. (Fig 1.) – almost as many as there are people on the planet [10]. While growth in mobile-cellular penetration is flattening, reaching 96% by the end of 2013, mobile broadband continues to grow strongly, on average by around 40% annually between 2010. and 2013. Also, by end 2013, there will be an estimated 2.7 billion people using the Internet worldwide. In view of the steep growth of mobile broadband and the widespread deployment of mobile infrastructure, expectations are high that mobile-broadband services will become equally as available as mobile-cellular telephony in the near future. Ericsson forecasts that by 2018. there will be 6.5 billion mobile-broadband subscriptions, almost as many as there are mobile-cellular telephone subscriptions in 2013 [7].

Today, almost all people on Earth live somewhere within reach of a mobile-cellular signal. Not all of those networks, however, have been upgraded to 3G technology, which is necessary to qualify as mobile broadband and provide high speed access to the Internet. By the end of 2012, the percentage of the world's population covered by a 3G network was around 50%.

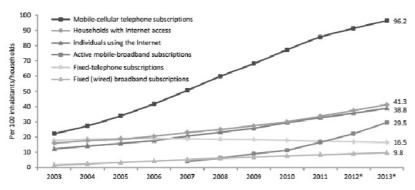


Fig. 1. Global ICT developments 2003-2013.

The use of Internet via wireless networks and devices will continue to grow strongly, accompanied and/or driven by an ever-increasing supply of mobile applications and services in the markets. An important trend highlighted

in previous reports [10], and which will continue in the near future, is the shift from voice to data traffic. According to Cisco [4], global mobile data traffic grew by 70% in 2012, to a level which corresponds to almost 12 times the entire Internet traffic in 2000. Half of the traffic was video traffic. Cisco forecasts that "global mobile data traffic will increase 13-fold between 2012 and 2017. Mobile data traffic (Fig. 2.) will grow at a CAGR of 66 per cent from 2012. to 2017, reaching 11.2 exabytes per month by 2017. [4]. The growth in traffic, mostly driven by smartphones, is closely linked to the spread of 4G services. While insignificant today, by 2017 4G is predicted to account for 10% of mobile connections and 45% of total mobile traffic.

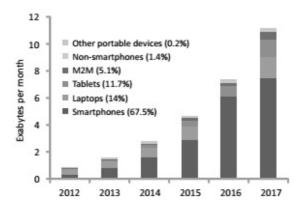


Fig 2. Mobile data traffic by end-user device

Ericsson reported that approximately 40% of all phones sold in Q3 2012. were smartphones and the growth of smartphone data traffic is expected to exceed the overall average. Also, they stated that mobile data traffic doubled between Q3 2011. and Q3 2012, and is expected to grow 12 times between 2012. and 2018, driven mainly by video. They expect total mobile subscriptions to reach 6.6 billion in 2012 and 9.3 billion in 2018 [7].

The number of mobile subscriptions worldwide has grown approximately 7% year-on-year during Q3 2013 (Fig. 3). The number of mobile broadband subscriptions grew even faster over this period – at a rate of 40% year-on-year, exceeding 2 billion in 2013. The amount of data usage per subscription also continued to grow steadily and around 55% of all mobile phones sold in Q3 2013. were smartphones. Together, these factors have contributed to an increase in monthly mobile data traffic over Q3 2013. that exceeded total monthly mobile data traffic in Q4 2009. [8].

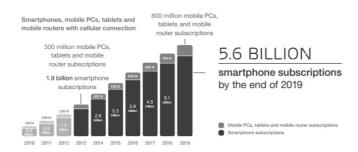


Fig 3. Mobile PCs, tablets and mobile subscriptions

Traffic in the mobile phone segment is primarily generated by smartphones. By 2019, smartphone subscriptions are expected to triple, resulting in rapid traffic growth. Total monthly smartphone traffic over mobile networks will increase around 10 times between 2013 and 2019. (Fig. 4). [8]

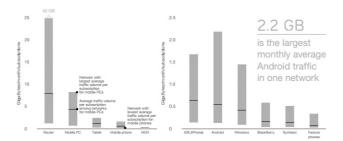


Fig 4. Monthly traffic volumes per subscription per device type a) and per operating system b)

Traffic volumes per subscription for mobile phones vary greatly both between operating systems and networks. The largest average traffic volumes per subscription are measured on Android smartphones that use up to an average of 2.2 GB per month, in the network with the largest usage for this device type. One reason for the wide spread is the difference in data plans offered to subscribers. Android models have a greater variance due to a larger diversity of device models. In networks where high-end models dominate, average usage on these devices exceeds average iPhone usage.

ANDROID, THE WORLD'S MOST POPULAR MOBILE PLATFORM

Since its debut in 2008, Android has evolved so quickly that it's easy to lose track of all the updates and milestones it reached with each new version. Heck, there are hundreds of updates, however minor, that are now so ingrained into our Android user experience that one might forget they once didn't exist. The platform has released 39 version updates to the public, chock-full of countless feature additions, improvements and fixes. During this whole period of android development the latest versions offer better ways to build new applications, especially in the educational purposes [21]. Android powers hundreds of millions of mobile devices in more than 190 countries around the world. It's the largest installed base of any mobile platform and growing fast—every day another million users power up their Android devices for the first time and start looking for apps, games, and other digital content [5]. Android gives a world-class platform for creating apps and games for Android users everywhere, as well as an open marketplace for distributing to them instantly. Android gives everything to build best-in-class apps experiences. It gives a single application model that lets you deploy your apps broadly to hundreds of millions of users across a wide range of devices—from phones to tablets and beyond. Android also gives tools for creating apps that look great and take advantage of the hardware capabilities available on each device. It automatically adapts your UI to look its best on each device, while giving you as much control as you want over your UI on different device types. For example, you can create a single app binary that's optimized for both phone and tablet form factors. You declare your UI in lightweight sets of XML resources, one set for parts of the UI that are common to all form factors and other sets for optimzations specific to phones or tablets. At runtime, Android applies the correct resource sets based on its screen size, density, locale, and so on [5].

Google Play is the premier marketplace for selling and distributing Android apps. When you publish an app on Google Play, you reach the huge installed base of Android. Beyond growing your customer base, Google Play helps you build visibility and engagement across your apps and brand. As your apps rise in popularity, Google Play gives them higher placement in weekly "top" charts and rankings, and for the best apps promotional slots in curated collections [5].

With Google Play for Education, teachers and administrators can browse content by curriculum, grade, and standard — discovering the right content for their students. Over 30 million students, faculty, and staff are already using Google Apps for Education and other Google services. Many of these schools are excited to take advantage of tablets with Google Play for Education and they look to bringing your apps into their classrooms, especially apps using Google sign-on. Google Play for Education brings the innovation of Android technology into classrooms. School districts can set up and deploy large numbers of devices in just minutes or hours rather than days. Powerful browsing tools let educators quickly discover apps, videos, and other content—with many recommended by teachers and categorized according to familiar Core Curriculum standards. After finding apps they want to use, educators can push them instantly to student devices over the air. They can send the apps to individuals or groups of any size, across classrooms, schools, or even districts.

OPERATING SYSTEMS - IOS, BLACKBERRY, SYMBIAN, MICROSOFT, ANDROID

Based on research and current trends, it is forecast that Google's Android operating system will have runaway market dominance over the next four years

According to research firm Gartner, Android will become the number one operating system for newly

purchased smart phones during 2011, as it is shown in Figure 5. At the same time the once dominant Symbian OS will slide into obscurity and the history books, as the next generation leave it behind, with handset manufacturers discarding it from their future plans [13,20-22]

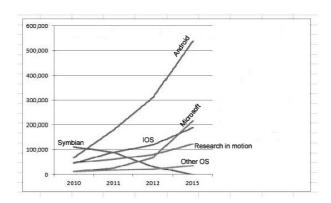


Fig 5. Worldwide Sales to End Users by OS

Market diversity and variance

There are currently around 6,500 different models of mobile internet device, this includes the whole spectrum of mobile phones with internet access, smart phones, tablets etc.

By 2015. It is expected just under half of new sales will be based on the Android OS, as is shown in Figure 6, but perhaps more surprisingly, and thanks to the paring of Windows mobile with manufactures such as Nokia, it is currently forecast that Microsoft mobile OS sales will overtake those of Apple's mighty IOS [13,20-22].

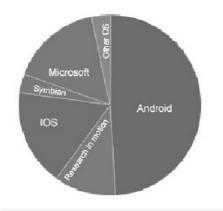


Fig 6. Market share 2015.

In February 2011, 15% of Google's searches were on mobile devices, which is nearly one in seven. Social Networking is an area where mobile apps are really moving ahead fast, with over 250 million users currently accessing Facebook through their mobile devices. There are more than 200 mobile operators in 60 countries working to deploy and promote Facebook mobile products 48% of Smartphone Users Watch Video on their devices. Over 70% of smartphone users search because of an ad they've seen either online or offline. Nearly 80% of large online advertisers still do not have a mobile optimized site [13,20-22].

DIGITAL NATIVE - A NEW SOCIAL CATEGORY

In social sense, all these changes have led to a new category of population, named by a new definition - a digital native. It is defined as a youth, aged 15-24 inclusive, with five years or more experience using the Internet [8]. Under this model, a simplifying assumption is made that once someone in their youth starts to use the Internet they continue to use it year after year. This is called the monotonicity assumption.

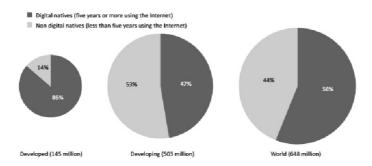


Fig 7. Percentage of digital natives among youth Internet users 2012.

It is clear that "digital media are changing the way young people learn, play, socialize, and participate in civic life" [11]. Digital natives are: highly connected, want quick access to information, want customization, are able to process parallel sources of information, and most important - have "never experienced a 'pre-digital' world" [16]. Most of the teachers have formed their brains in 'pre-digital' world. Although more research is needed in order to understand the impact that digital natives have in driving the information society, and on the way digital natives learn, work and do things, there is general agreement that young people learn and adapt to ICTs quickly. In other words, in their hands and with their minds, ICTs become a particularly powerful tool. According to this model, in 2012 there were around 363 million digital natives out of a world population of nearly 7 billion. This means that 5.2 % of the world's population and 30% of 15-24 year olds engaged in sustained activity online. The digital natives are, globally speaking, a minority of today's youth. Within the next five years, therefore, the digital native populations in the developing countries will more than double, assuming no drop-outs from Internet usage among the youth population.

Furthermore, young people are more likely to be online than the general population as a whole. In addition, there is a strong correlation between a nation's ICT and the percentage of its population that are digital natives.

Education, is another important correlate to digital nativism. An analysis of the major educational indicators, using the most recent available data, and their relationship to a nation's share of digital natives brings out a number of interesting linkages. There is a relationship between school enrolment at the secondary and tertiary levels and a country's proportion of digital natives. The age range for digital natives, namely 15-24, places them within these stages of education. What can be seen overall is that, as secondary and tertiary school enrolment levels go up, so too does the percentage of digital natives. This suggests that secondary and tertiary education plays a positive role in enhancing levels of digital nativism, although this may also be the outcome of additional factors.

It is also clear that as a result of this ubiquitous environment and the sheer volume of their interaction with it, today's students think and process information fundamentally differently from their predecessors. These differences go far further and deeper than most educators suspect or realize. "Different kinds of experiences lead to different brain structures, "[6]. It is very likely that our students' brains have physically changed – and are different from ours – as a result of how they grew up. But whether or not this is literally true, we can say with certainty that their thinking patterns have changed [6]. Each new generation of students asks us continually to re-think our understanding of the project and purpose of education, both online and off.

Another interesting relationship exists between a country's level of digital nativism and gender balance within school enrolment. There is a statistically significant relationship between digital nativism and the ratio of females to males in secondary school and tertiary school. While it is too early to draw firm conclusions from this particular observation, for the moment, girls are more likely to gain access to the Internet from education facilities. This would require equal access to education for both boys and girls. The analysis shows that the higher the enrolment of females in secondary and tertiary schools, the higher a country's share of digital natives. These findings will require additional research.

Literature review has found that despite the considerable attention focused on 'digital natives', few studies have carefully investigated the characteristics of this group [12]. The purpose of this study is to contribute to the debate on digital natives and e learning, giving our case study, with a group of students from ICT College Belgrade.

THE USAGE OF MOBILE PLATFORMS IN ICT COLLEGE - CASE STUDY

Worldwide, many forms of technology are being introduced into educational environments: smart boards, Web 2.0 technologies like blogs, Facebook and YouTube, Virtual Learning Environments such as Moodle and Blackboard, and mobile apps for learning that are available on cell phones or other mobile Internet-connected devices.For example, a project in New York teaches children entirely through the use of technology where students work in teams to make video games to learn the concepts they are being taught.Technology could even signal the end of traditional classroom-based education. The Khan Academy [19], among other Open Education Resource providers, seeks to

provide quality education on many different subjects using YouTube videos and online worksheets to test understanding for anyone, anywhere, anytime. Forecasts for growth in virtual or online schooling even predict that half of secondary level courses will be delivered online by 2020. [19].

As more teachers start to introduce more technology into their courses, educators need a clearer idea what kind of technological environment students are familiar with, and what are their abilities to successfully engage with technology to fulfill student's activities.

Mobile technology allows students more efficient and convenient way to engage with their teaching materials and with other students 24/7. Mobile devices offer unique access to learning resources, both inside and outside the classroom, regardless of their location in the school, on the bus, or at home.

In order to improve the quality of acquired knowledge and to increase the nuber of students that passed exams, we did the questionnaire with the students of the ICT College Belgrade. The aim was to show how young population, especially students, currently use mobile phones, the Internet and how are they accessing the Internet. Questions in the questionnaire were given to the students of third year, and the results are shown below.

In Figure 8, is shown that all students from a questionnaire have a computer while studying. This figure differs significantly from the global picture in Serbia, where only about 50% of households own a computer [18].

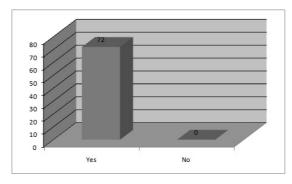


Fig 8. Do you have a computer in your accommodation?

Furtheron, according to the census conducted in Serbia in the last 3 months in the 2011th year, 99.5% of students use the Internet. [15]. Our study shows the same results. On Figure 9. can be seen that these values correspond to the situation among our students. Although only 40% of households in Serbia have Internet access, it is clear that for the population of students that picture is completely different.

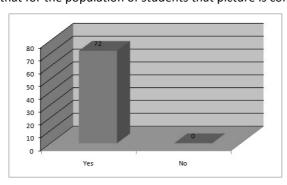


Fig 9. Do you have an Internet connection?

All of our students use the Internet, which can be seen in Figure 10, and this information allows easy electronic communication and downloading various facilities needed for teaching and exam preparation.

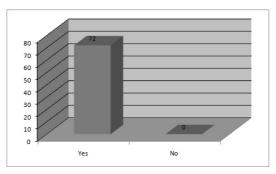


Fig 10. Do you use the Internet?

Expected results were obtained also for the number of mobile device users, which can be seen in Fig. 11

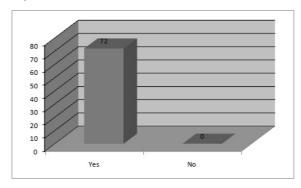


Fig 11. Do you have a mobile device?

Mobile devices, especially smart mobile phones, are massively used by young people. Students of ICT College widely use the possibility of mobile phones to connect to the Internet. Fig. 12 shows that about 80% of our students make a connection to the Internet by using a mobile phone, while Fig.13 shows that 43% of students are willing to use mobile phone to obtain the desired content from the Internet, 6% willing to use tablet PC, and 51% household computer.

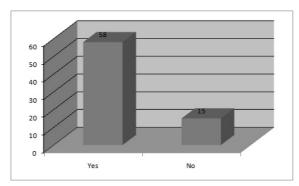


Fig 12. Do you use your mobile phone to connect to the Internet?

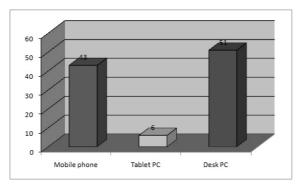


Fig 13. How do you prefer to download information from the Internet?

Smart phones are the latest wave of mobile phones. The delivery of about 4 billion smart phones is expected from 2011. to year 2015. [17], clearly imposing them as most pervasive computer and Internet access device today. In many respects, today's phones are more powerful computers than the computers of just a few years ago. Smart phones already play an important role in providing access to the Internet. In the United States, more than one-quarter of mobile phone owners use their smart phones, not PCs, for Internet access [14]. Fig.14 shows that 63% of students are using smart phones.

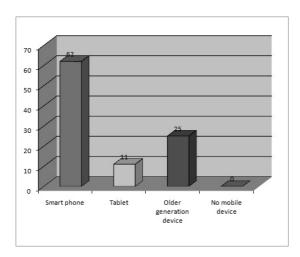


Fig 14. What type of mobile device you use?

Figure 15. shows that the most student mobile devices are based on Android OS, about 58%, so the development of educational apps for that type of OS, should be strongly encouraged.

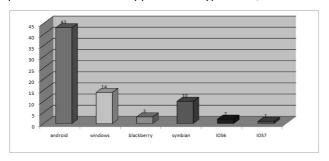


Fig 15. Which OS do you have on your mobile device?

The most applications of the mobile operating systems are possible to use, by the free download process. Student are free to download various types of the apps from the, so-called, OS markets. Figure 16. Shows that the 74% of students installed more than 10 apps on their mobile device.

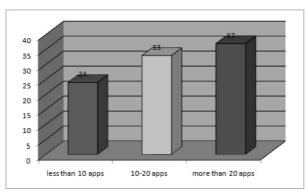


Fig 16. How many applications you use from appropriate OS market?

CONCLUSION

The use of mobile platforms for the purposes of the educational process is definitely an important tool in development of e-learning processes. It is shown that the percentage of mobile devices in the younger population in whole world is very high, and, according to that fact, the development of the applications, based on a variety of platforms, is on the high level. Depending on the operating system which is the base of the mobile device, (it has been shown that it is currently the Android OS), and given the number of mobile users and mobile device profile of students in ICT college in Belgrade, it can be concluded that the learning process can be complemented by a multiple choice, or even the design of applications that can be easily incorporated into teaching materials, and thus the students 24/7 and anywhere, able to complete their exam prerequisites. Except for educational purposes, mobile platforms can provide an outstanding contribution to survey students, which would create the opportunity for rapid response, and



timely removal of problems arising during the process of teaching, extracurricular activities and the like.

One of the possible future analysis is certainly cost effective, which could deal with the assessment of the costeffectiveness of the transfer of mobile devices to students by the high education institution, adding efficiency of mastering the course materials through a variety of statistical models with different learning and exams outcomes.

REFERENCES

- 1. Bayne, S. and Ross, J. (2007), The "digital native" and "digital immigrant": a dangerous opposition. Annual Conference of the Society for Research into Higher Education, Brighton. Retrieved from: http://www.malts.ed.ac.uk/staff/sian/natives final.pdf
- 2. Bennett, S., Maton, K. and Kervin, L. (2008), The "digital natives" debate: A critical review of the evidence. British Journal of Educational Technology, 39(5), 775-786.
- 3. Bennett, S. and Maton, K. (2010), Beyond the 'digital natives' debate: towards a more nuanced understanding of students' technology experiences. Journal of Computer Assisted Learning, 26(5), 321-331.
- 4. Cisco Annual Report 2013,

http://www.cisco.com/web/about/ac49/ac20/about_cisco_annual_reports.html

- 5. developer.android.com/about/index.html
- 6. Digital Nativism (n.d.). Retrieved 26 March 2013 from: http://fno.org/nov07/nativism.html.
- 7. Ericcson News Center, 2012. http://www.ericsson.com/news/1659597
- 8. Ericcson Mobility Report, November 2013, http://www.ericsson.com/res/docs/2013/ericsson-mobility-report-november-2013.pdf
- 9. Hargittai, E. (2010), Digital Na(t)ives? Variation in Internet Skills and Uses among Members of the "Net Generation". Sociological Inquiry, 80(1), 92-113.
- 10. ITU (International Telecommunication Union). 2013. Measuring the Information Society 2013.
- 11. Ito M., Horst H. Living and Learning with New Media: Summary of Findings from the Digital Youth Project, http://digitalyouth.ischool.berkeley.edu/files/report/digitalyouth-WhitePaper.pdf
- 12. Li, Y. and Ranien, M. (2010), Are 'digital natives' really digitally competent? A study on Chinese teenagers. British Journal of Educational Technology, 41(6), 1029-1042.
- 13. mobithinking.com
- 14. Pew Internet, survey sample of 2,277 people, July 2011.

http://pewinternet.org/~/media/Files/Reports/2012/PIP_Digital_differences_041312.pdf

15. Republicki zavod za statistiku Srbije,

webrzs.stat.gov.rs / WebSite/repository/.../00/00/.../PrezICT2011.pps.

- 16. Sánchez, J., Salinas, A., Contreras, D. and Meyer, E. (2011), Does the new digital generation of learners exist? A qualitative study. British Journal of Educational Technology, 42(4), 543-556.
- 17. Strategy Analytics. 2011. Strategy Analytics Quarterly Research: Mobile Broadband Trends Q2 2011. Customer report prepared for Qualcomm
- 18. World Economic Forum, The Global Information Technology Report 2012.

www3.weforum.org/docs/Global_IT_Report_2012.pdf

- 19. www.academia.edu/1470307/THE_NET_GENERATION_IN_JAPAN_A_SURVEY_OF_INTERNET_BEHAVIOURS_O F STUDENTS AGED 13-21
- 20. www.gartner.com/it/page.jsp?id=1622614
- 21. www.google.com/events/thinkmobile2011/presentations.html
- 22. www.google.com/think/insights/topics/think-mobile.html
- 23. www.kinvey.com/blog/2586/android-version-history-a-visual-timeline



Performance Indicators to assess Distance Education Quality in Malta

Matthew Montebello

ABSTRACT

The use of performance indicators (PIs) as quality assurance (QA) instruments within traditional campus-based higher education institutions has been the centre of much debate and research as educators and administrators questioned the effectiveness of such tools. Additional issues, doubts and research possibilities materialized when the same PIs were applied to assure distance and eLearning courses quality offered by traditional universities and other commercial higher education institutions. This paper analyses the issue of PIs in eLearning policy as quality assessment tools by briefly tracing the development of PIs within QA schemes, as well as, investigate the way they have evolved to form part of eLearning policy.

Keywords: Performance indicators, eLearning, quality assurance, distance education, online education, higher education

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INTRODUCTION

A combination of three phenomena, namely, political, commercial and scientific, has led to an amplified demand for higher education courses, programmes and certification. The collapse of political barriers and the attractiveness of a free market economy, together with the commercialisation of universities and escalation of other private higher institutions, in tandem as well with the widespread evasiveness of ICT in all sectors of society, least of all higher education, have led higher education to become easily and conveniently available to a wider audience. This not only brought about other parties who's main financial interest has nothing to do with education, but also a much more serious threat, quality degeneration. The boost in demand for higher education certification through the electronic medium is testament to the proliferation of distance education and online courses within the higher education realm (Zou, 2006). Similar to the development of quality assurance and the evolution of traditional higher education policy, that brought about the debated use of performance indicators (Patrick & Stanley, 1998), eLearning policy had to adjust in order to accommodate quality assurance preoccupations, thereby satisfying both the educators and administrators (Stella & Gnanam, 2004) (Alstete & Beutell, 2004). In this paper I will be specifically focussing on the role of performance indicators in the elearning QA policy, rather than QA instruments in general. The rest of this paper is organised as follows. Section 2 will look into QA and PIs in particular, with particular focus on whether mechanisms developed to assure quality within traditional higher education campus-based institutions in Malta can be directly transposed onto elearning. The specific use of PIs within elearning policy will be analysed in Section 3, while three case studies will be presented in the following section to further shed light on how such a policy implementation truly assures the quality of higher education programmes and institutions. My final thoughts, together with the conclusions drawn will be presented in Section 5.

PERFORMANCE INDICATORS

Quality assurance in higher education requires no justification as the term higher, by definition and expectation, entails something exceptional, of excellence (Harvey & Green, 1993), and thereby paramount that it strives to maintain such high quality standards that distinguish it from all other kinds of education. The need of a quality assurance policy in higher education in Malta is also mandated by the fact that a private and/or public institution is accountable to investors, management, and society with regular assessments, audits, and endorsements (Ball & Halwachi, 1987) (Blackmur, 2007). One popular way to measure and quantify quality levels in higher education has been the use of performance indicators. Such instruments are usually designed to provide reliable information on the nature and performance of the higher education institution, thereby giving a consistent set of measures of this performance (Patrick & Stanley, 1998). They can be considered as a range of statistical indicators that offer an objective measure of how the institution is performing. Such information could not only provide information on the nature and performance of the HE institution, but could potentially be employed as a performance benchmark for comparisons between similar institutions, and thereby used as quantitative evidence to inform policy makers (Barnetson & Cutright, 2000) to help monitor the progress of program implementation, compare actual performance

with planned or targeted goals, identify successes and areas in need of improvement, and identify opportunities for future enhancement. Pls are typically scored to mathematically check whether a specific institution is above a set threshold or not, and whether the required quality assurance standard, the Pls are measuring, has been achieved. Such standards are set upon higher education criteria that administrators and policy makers set out to ensure various dimensions of best practice (Martin & Stella, 2007). Before getting into the content and interpretation of Pls it is important to point out that Pls are by far the most widely employed QA instrumentation due to their as post-performance characteristics, in contrast to others like activity indicators that are predominantly meant to continuously asses ongoing processes and activities that will eventually bring about the final performance.

2.1 Pls content

The contents of the PIs in higher education quality assurance policy vary from country to country but some common trends can easily be traced out into five categories. The first category gives important statistical information about where the entrants' come from by quantifying the different proportions sourcing from various underrepresented groups such as state schools or colleges, specified age-adjusted socio-economic classes and low-participation neighbourhoods. This PI that is commonly termed 'widening participation indicators', is significant and justified to be part of such a policy because it ensures that higher education is not exclusive for a particular sector of society but accessible and affordable to all young people from whatever community or family they originate, including those with no particular tradition of higher education.

Non-continuation rates of students who failed to complete their higher education is another important indicator that reveals important information about the performance of that institution. The interpretation of such an indicator and the rest of the PIs will be discussed in the next sub-section. The third category corresponds with the previous one as it takes into consideration and attempts to evaluate completion rates, thereby giving an indication of successful graduates at a particular institution. This indicator sheds significant light on the success of the institution itself and considered an important factor within the quality assurance policy. At a more academic and research level a higher education institution requires to excel and thereby a number of PIs set out to measure and assess criteria related to research output. Traditional universities have over the years measured up against each other merely only on such an academic criteria especially before the 'new managerialism' era (Deem, 1998).

One final category of PIs that are commonly employed with QA policies at higher education is the employment of graduates, which in some way impinges and says something about the education levels they have accomplish or managed to attain from the same institution.

2.2 PIs interpretation

The interpretation of the above mention five categories of PIs, based upon criteria and standards that had been set to ensure best practices, does not necessarily translate congruently to the original concepts of best practices set out in the quality assurance policy. We may have different understanding of what 'best' is, and there may be no one measure of it, and this can defeat the purpose of the policy itself. When designing, setting, employing and interpreting PIs administrator need to ensure that the spirit in which the QA policy was framed remains the same. Furthermore, if the outcome from the PIs interpretations are used to compare between HE institutions, then it needs to be ensured that the criteria set out are similar enough to compare and clear enough to identify the differences. Such policies within an institution are usually designed to holistically cover all possible facets, yet the benchmarks of two or more institutions can potentially have diverse benchmarks beyond comparison.

E-LEARNING POLICY

Similar to the need of a QA policy in traditional campus-based programmes and institutions in Malta, is the indispensable necessity of a QA policy for distance and elearning courses and higher education providers that are increasingly emerging. The exponential growth of such commercial providers, together with the ICT accessibility escalation provided by the widespread use of the Internet, coupled with a supportive political/financial situation, has further consolidated the need to assess, regulate, and quality assure both the programmes offered and the institution offering them. The focus here will be on issues related to performance indicators in elearning policy as part of the QA instrumentation in Malta.

3.1 More of the same?

One major concern when considering QA in elearning is whether to apply the same criteria, standards and indicators as those applied to traditional face-to-face education. Distance education and elearning are intrinsically different from conventional education (Van Damme, 2002) due to their characteristic methodological, pedagogical and organisational features. A thorough investigation is required to clearly identify what distinguishable attributes exist between the two modalities within a specific context, and not just in general. The institution's higher education philosophy, ground principles and educational standards when quality assuring its campus-based courses needs to

adjust and accommodate the different criteria that adequately fit their corresponding online course. The previously required assurances for traditional course are more than ever required and applied to elearning courses to meet the same academic and professional standards (World Bank, 2002), thereby introducing adequate criteria, standards and performance indicators within the elearning policy.

3.2 Continuous self-assessment or not?

Another issue that requires attention when consider QA in elearning is the self application of performance indicators as a continuous process, considering that PIs are conceptually post performance as mentioned earlier. Self-assessment can be performed at mainly three stages during the delivery of any kind of course or programme, namely, before, during or after. In the case where a higher education institution is seeking to ensure it exceeds the quality assurance thresholds set by a certifying authority's PIs, then a pre-screening process before the course and the institution are given the go ahead, is justified. On the other hand, a continuous self-assessment process where activity indicators (rather than PIs) are being employed by a HE institution to self-monitor itself, is encouraged to ensure it monitors and maintains its quality delivery or adjusts to improve it. Finally, PIs are even more ideal at the end of an educational delivery performance to reconfirm the institution/course standing, as well as, to compare to other similar institutions/courses. The decision of whether to continuously self-assess or not depends on motivation, context and timing.

3.3 Challenges

The main challenges with performance indicators in elearning policy emerge from the issues discussed in the previous sections as the specific characteristics of the domain itself distinguishes it from traditional learning and thereby requires specific criteria, standards and indicators to assure higher education providers attain, maintain and endeavour to operate within a reliable, ethical, efficient, and quality-oriented environment taking into consideration the benefits of all the stakeholders. eLearning policy should clearly identify and explicitly distinguish how performance indicators deviate from traditional indicators highlighting the variances that define and differentiate them uniquely. PIs in such a policy need to specifically capture the new conditions and structures within HE itself but which elearning emphasizes even more due to its nature. This is not just a matter of delivery but additional factors like resources, contact hours, administration, faculty members, coursework, course management, and other academic aspects that are usually taken for granted, due to their accustomed and established modus operandi, but which now take a completely new role, thereby generating new and atypical challenges for the validity of quality assurance through PIs. Another aspect that PIs need to capture differently from traditional HE learning, is the fact that the focus on who takes the leading role tends to spin around completely from the educator and institution, to the learner alone. Due to the distance factor and the extent of student control over the same outcome, PIs in elearning policy need to focus even more on the learning outcomes irrespective of the learning input. This is distinctly dissimilar from traditional PIs as student outcomes and attainment requires specific attention, assessment and quality assurance of how good the elearning institution is rigorously setting standards on how to measure achievement, certify, and eventually bestow degrees that are indistinguishable and recognised as their traditional counterparts. This stigma that elearning degrees, not just in HE, are considered of a lower quality, needs also to be addressed by PIs to specifically remove any doubts and any misconception that the degree awarded is dubious or inferior.

Another challenge related to quality assurance is the issue of site visit. This matter of physically going on site highlights most prominently the distinction between elearning and traditional learning as assessors are unable to actually go to the 'brick and mortar' institution and get a feel of the ambiance, resources available, staff and overall educational environment. Performance indicators need to be able to capture the equivalent of a site visit by capturing the essence of what happens during a physical equivalent, and assess those same criteria and standards that traditional PIs are out to evaluate. This turns out to be most challenging but it might simply involve a run-through the elearning course itself by a professional assessor, or even random online visits to capture snapshots of what it happening.

CASE STUDIES

To better make the case for the different performance indicators in elearning policy, a number of real case studies will be presented to show how quality assurance has already been effective and has addressed much of the challenges discussed in the previous section. The Open University around the world ranks amongst the top universities for the quality of it performance that is predominantly by distance through its method of supported open learning (Sharples, et al., 2012). In UK alone students have highly rated the Open University as specific performance indicators assessed traditional quality assurance matters, as well as, other issues related to elearning (MORI, 2013). These included access to learning resources and educators without physically having to attend, flexibility in access to training and learning programs any time and from anywhere, flexibility to manage learning around work, family and personal commitments, capacity for students to learn at their own pace, as well as, capacity to network with other

learners via online forums. In Sri Lanka elearning in higher education has been making giant strides as policy makers have embraced the medium by developing a quality assurance toolkit (Rama & Hope, 2009) for distance and higher education institutions and programmes. This toolkit makes specific use of performance indicators to address elearning within the quality assurance policy by putting together a rubric to assess the quality of potential higher education programmes or institutions, as well as, existent ones. Similar toolkits have been made available in UK where the Quality Assurance - Quality Enhancement in e-Learning Special Interest Group (QAQE, 2013) developed a toolkit for 'Harnessing Quality Assurance Processes for Technology Enhanced Learning' whereby higher education institutions are seeking to quality assure their programmes that employ technology using a variety of modes like blended, online and distance courses (Barefoot, et al., 2011). Another similar toolkit developed by the Commonwealth of Learning makes use of performance indicators to judge the quality of non-traditional learning methods that involve open and distance education (Latchem, 2012). Finally the European Students' Union acknowledges the use of focussed performance indicators to ensure the quality of higher elearning programmes to be able to acknowledge the achieved learning outcomes while taking into consideration its specifics (ESU, 2013).

CONCLUSIONS

In this paper performance indicators have been discussed within the context of elearning policy as instruments to assess and assure quality of higher education programmes and institutions in Malta. It has been argued that such mechanisms, due to their nature, are ideal for pre-screening purposes as in self assessment exercises to test, gauge and enhance the programme and/or institution prior to a QA exercise to attain accreditation. Alternatively, it could also be ideal to assess quality post procedure to maintain accreditation or compare with similar programmes and institutions. The main focus of the paper was to ensure that PIs applied to elearning within a QA policy need to take into consideration the unique characteristics of elearning in higher education in contrast to traditional learning at campus-based universities, to ensure that the QA exercise truly reflects the real intentions of what is being assessed. The majority of the PIs employed for traditional learning can be directly applied to elearning as they address theoretical criteria of a programme, but on the other hand, elearning policy makers need to be alert and knowledgeable about the specific characteristics of elearning and how it philosophically and pedagogically differs from traditional ways of teaching. Those aspects where elearning varies drastically from traditional ways need to be dealt assiduously, whereby elearning policy makers need to be creative and yet effective in adjusting the QA performance indicators to reflect the educational criteria under investigation.

REFERENCES

Alstete, J., & Beutell, N. (2004). Performance indicators in online distance learning courses: a study of management education. *Quality Assurance in Higher Education*, 12 (1), 6-14.

Ball, R., & Halwachi, J. (1987). Performance indicators in higher education. Higher Education, 393-405.

Barefoot, H., Gamble, M., O'Hare, D., Kuit, J., Mellar, H., Newland, B., et al. (2011). *A Toolkit for Harnessing Quality Assurance Processes for Technology Enhanced Learning*. UK: Steering Group of the Quality Assurance - Quality Enhancement in e-Learning Special Interest Group.

Barnetson, B., & Cutright, M. (2000). Performance indicators as conceptual technologies. *Higher Education*, 40, 277-292.

Blackmur, D. (2007). The Public Regulation of Higher Education Qualities: Rationale, Processes, and Outcomes. In D. Westerheijden, B. Stensaker, & M. Rosa, *Quality Assurance In Higher Education* (pp. 15-45). Netherland: Springer.

Deem, R. (1998). 'New managerialism' and higher education: The management of performances and cultures in universities in the UK. *International Studies in Sociology of Education*, 8 (1), 47-70.

ESU. (2013). Policy paper on quality of higher education. Brussels: European Students' Union.

Harvey, L., & Green, D. (1993). Defining Quality. Assessment & Evaluation in Higher Education .

Latchem, C. (2012). Quality Assurance toolkit for Open and Distance Non-formal Education. Vancouver: Commonwealth of Learning

Martin, M., & Stella, A. (2007). External quality assurance in higher education: making choices. Paris: UNESCO.

MORI, I. (2013). *The National Student Survey 2013*. Retrieved Nov 15, 2013, from HEFCE: http://www.thestudentsurvey.com/

Patrick, W., & Stanley, E. (1998). Teaching and Research Quality Indicators and the Shaping of Higher Education. *Research in Higher Education*, 39 (1), 19-41.



QAQE. (2013). *Quality Assurance - Quality Enhancement Special Interest Group*. Retrieved Nov 15, 2013, from www.http://qaqe-sig.net/

Rama, K., & Hope, A. (2009). Qualty Assurance Toolkit. Vancouver: Commonwealth of Learning.

Sharples, M., McAndrew, P., Weller, M., Ferguson, R., FitzGerald, E., Hirst, T., et al. (2012). *Innovating Pedagogy 2012: Open University Innovation Report 1.* Milton Keynes: The Open University.

Stella, A., & Gnanam, A. (2004). Quality assurance in distance education: The challenges to be addressed. *Higher Education*, 47, 143-160.

Van Damme, D. (2002). *Trends and Models in International Quality Assurance and Accreditation in Higher Education in Relation to Trade in Education Services*. Washington: OECD/US forum on trade in educational services.

World Bank. (2002). *Constructing knowledge societies; new challenges for tertiary education.* Waschington DC: The Bank.

Zou, J. (2006). Discussion on the Application of the Modern Education Technology to the Higher Education Popularization Process. *Popular Science* .



Proposed Offering of Doctor in Communication Education Through Distance Learning

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ABSTRACT

Communication Education is a discipline recognized by the Commission on Higher Education (CHED) through its CHED Circular Memo (CMO) as a specified career of a Master of Communication graduate. The Polytechnic University of the Philippines Open University (PUP-OU) offers Master in Communication program to be more accessible to people. In PUP-OU, most of the students enrolled in the Master in Communication Program are in the field of communication education. In the Philippines, the University of the Philippines (UP) is the only university that offers a Doctorate degree in Communication: PhD Communication (UP-Diliman), PhD Development Communication (UP-Los Baños) and Doctor in Communication (UP-Los Baños OU). This study aims to propose the offering of Doctor in Communication Education through distance learning by determining the need for the program, its marketability and its feasibility and preparedness in terms of curriculum, faculty, administration and support services. Methods used in this study are both quantitative and qualitative where in data from communication educators were gathered through a survey and interview with the officials of PUP- OU was conducted. The results of the study showed that there is a need and there will be possible enrollees in the proposed program. The study concludes that Doctor in Communication Education can be offered through distance learning.

Keywords:

INTRODUCTION

Communication is the act of sending ideas and opinions from one person to another. Writing and talking to each other are only two ways human beings communicate (Biagi, 2003). Different people need information intended for a variety of purposes and it takes variety of forms, from face to face conversation, to hand gesture and messages sent through telecommunication networks. They spend all of our lives talking and communicating with others.

Communication Education is a discipline recognized by the Commission on Higher Education (CHED) through its CHED Circular Memo (CMO). It is one of the specified professions/ careers of a Master of Communication graduate.

"Individuals who earned a degree in MA Communication are expected to occupy middle to top management positions in communication- related occupations in any of the following settings: corporate communication, public information, public relations and advertising, mass media, communication education, and research and development." (CHED CMO No. 27, Series of 2011)

The Polytechnic University of the Philippines being the pioneer institution in the Philippines to offer the distance education started in 1990. PUP- Open University System consists of two schools namely: School of Distance Education and School of Professional Studies. (http://www.pup.edu.ph)

To be more accessible to the people, PUP Open University opened 11 centers namely: PUP Mariveles, Bataan, PUP Bansud, Oriental Mindoro, PUP Commonwealth, Quezon City, PUP Lopez, Quezon, PUP Maragundon, Cavite, PUP Sta. Mesa Manila, PUP Sta. Rosa, Laguna, PUP Sto. Tomas, Batngas, PUP Unisam, Quezon, PUP Taguig and PUP General Luna.

PUP-OU is offering nine programs under the School of Distance Education. One of which includes Master in Communication. According to the program description, "The Master in Communication (MC) is a graduate degree Program focuses on innovative, creative and skills oriented curricular program steeped in research technology culture

and management. It addresses the need for a more balanced Philippine communication environment by preparing communication managers and decision makers to be more attuned to the challenges of information society and global competition."

This program admits professionals who are in the field of training, communication education, mass media, corporate communication, and public or government information practice. The course recognizes the importance of communication education in the field.

This study is conducted to propose for the offering of Doctor in Communication Education through distance education. This will also determine the need for such program as well as the marketability of the program. Also, this will determine its feasibility and the preparedness of PUP Open University in offering such program.

This study aims to propose the offering of Doctor in Communication Education (DCommEd) through distance learning. Specifically, the research aims to: determine the need for the program DCommEd; determine the marketability of the program DCommEd; determine the feasibility of the program DCommEd in terms of curriculum, faculty, administration and support services; and determine the preparedness of PUP-OU in offering the program DCommEd in terms of curriculum, faculty, administration and support services.

The focus of this research is to propose the offering of the program DCommEd. The scope of this study will revolve around the meaning of communication education, the importance of education in the field of communication, the preparedness of PUP to pioneer in offering the program, the need and marketability of the program, and the context of the program.

Due to the limited available time and resources, the study has its weaknesses. The study only covered the assessment of the preparedness of the university in offering a new doctorate program through distance learning. It did not include the perception of the communication educators and Master in Communication students. This is limited to randomly selected colleges and universities in the Manila that offer communication courses. Further, it was limited to communication instructors who are currently enrolled and/or already obtained a Master's degree.

Moreover, the researcher conducted an interview to the participants. Students taking up Master in Communication were not interviewed. Hence, the interview was conducted to the University officials to determine the feasibility of the program and the preparedness of the university.

The perceptions and regulations of government institution such as Commission on Higher Education was included in the study.

Communication Education was used in the study to refer to the profession of teaching communication courses in the tertiary level.

REVIEW OF RELEVANT LITERATURE AND STUDIES

Communication Education

Communication Education was ideally established to teach people to communicate effectively whether in public setting or in private. (Daly, et. al. 1999) According to Friedrich, (2000), in the 70 years of existence of the field of communication existence, very little integrated attention has been given to the methods involved teaching communication. Although there have been journal articles on techniques, and classes on instruction in communication, there have been few attempts to integrate the many issues and concerns that the teachers face.

The term communication education was first cited by Gray in 1949 as he persuasively argued the case for studying communication education in the United States. (Vangelisti, 1999)

"A core complete examination of the route we have traveled in coming from our beginning... to our present position is well worth the undertaking... it will give us a still deeper understanding and appreciation of that position, in the same way that any study of history may provide the basis for a better orientation as an aid in determining the direction we should proceed" (Grey, 1949)

Communication instruction was part of the higher education since its beginnings, the currently known communication departments were not original providers of the subject. Communication in the beginning was part of the Languages and Literatures. (Vangelisti, 1999)

In the 1900's the emergence of the presence of the communication department in some of the universities in the United States began. According to Vangelisti (1999), the most common was the Department of Public Speaking which later in the 1920's changed its name to Department of Speech. Because of the development of the education system, the department later changed its name to Department of Speech Communication in the 1960's. And the most recent change was when it changed its name to Department of Communication.

The focus of the departments in instruction was on "developing skills of formal, public discourse through courses with such labels as Forensics, Declaration, Elocution, Oratory, Logic, Rhetoric, Extemporaneous Speaking, Debate, Dramatic Interpretation, and Public Speaking." (Vangelisti, 1999). When the department changed its name in the 1920's to Department of Speech, course works in theatre production were added by some universities. After 1920's the inclusion of speech science and training for speech therapists were considered and only in 1935 that the University of Oklahoma added coursework in radio.

Theodore Gross (1978), Dean of Humanities at New York City College, as cited by Vangelisti in 1999 argued that:

"Communication should be a course of study as important to young person's education as sociology or political science or foreign languages and should be integrated in the liberal arts curriculum. One does not justify the study of literature, history, or philosophy in terms of careers; one should not defend [the study of] communication only on the grounds of popular appeal or the number of jobs available. One must understand its sociology and history and technology and art and literature because it is the subject of our time and of the future."

According to Sprague (1999) there are four goals of Communication Education. These goals are based on the goals of the higher education. Goal setting is important in to every instructional decision that a teacher makes.

These goals are:

- 1. To Transmit Cultural Knowledge
- 2. To Develop Students' Intellectual Skills
- 3. To Develop Students' Career Skills
- 4. To Reshape the Values of the Society

PhD Communication

In the Philippines there is only one University that offers Doctorate degree in Communication. The University of the Philippines System offers three Communication Programs in PhD level. University of the Philippines, Diliman is offering PhD in Communication. This program is offered through the traditional system. Under the College of Mass Communication, the five departments are coordinating to offer the said program (http://masscomm.upd.edu.ph/college-secretary/history/about-cmc).

According to UP College of Mass Communication website (2011), another Doctor of Philosophy program is supposed to be offered in the Academic Year 2011-2012 which is Doctor of Philosophy in Media Studies.

The UP College of Mass Communication Guidelines for Doctoral Programs (2010) states the procedure for enrollment in a PhD Program. To be able to enroll in any PhD Program under UP-Diliman College of Mass Communication, one must finish a Master's Degree in a recognized institution with a GWA of at least 2.0 or equivalent. Thesis option is not stipulated in the Guidelines. Aside from the other requirements, one must be able to pass series of interviews and oral examinations with UP-CMC faculty members. Section 2.1 of the Guidelines states the General Requirements of the program. The study consists of 36 academic units excluding dissertation. There should be a maintaining average of 1.75 at the end of the academic year. For a student to be awarded with a PhD diploma, one must finish a doctoral dissertation.

Doctor in Communication

University of the Philippines- Los Baños is also offering a doctorate degree in communication- Doctor in Communication (DComm). According to http://www.upou.edu.ph/academic/programs/dcomm.html, this is offered under University of the Philippines- Los Baños Open University. This program promotes more independent learning and is more research based than other communication degrees. There are also 36 units that a student needs to complete in the program in order to finish the program before conducting a doctoral dissertation. The subjects include:

- Communication Theory and Practice
- Management of Communication Media Resources and Systems
- Communication Policy and Planning
- Organizational Communication, Information and Knowledge Management
- Information and Communication Media Technologies
- Corporate Social Responsibility Communication

- Advocacy and Social Mobilization
- Communication Research Paradigms
- Communication Research Methodologies
- Online Colloquium in Communication Research

Unlike in the traditional system, DComm being offered in the Open University through Distance Education is a doctorate degree by research. As what the UPLB- OU website says, most of the subjects or courses in the program are research intensive.

PhD Developmental Communication

PhD in Development Communication is offered also in the University the Philippines- Los Baños. UP- LB College of Development Communication has been recognized by CHED as Center of Excellence in Communication Education. This program is also offered with a total of 48 units including doctoral dissertation. According to the official website of UP- LB (http://gs.uplb.edu.ph/index.php/academic-programs/2-uncategorised/242-doctor-of-philosophy-indevelopment-communication):

"College of Development Communication (CDC) graduate programs provide aspiring students a high-level instruction in the study and practice of development communication. They tackle in greater depth and breadth the synergistic relationship between communication and development."

The students who wish to enroll in this program must have a master's degree from a recognized institution and must have at least one year of relevant work. It is not said in the website however if the master's degree should be relevant to Development Communication

As PhD Development Communication graduates, UP- LB official website said that they are trained to develop critical thinking skills needed in administration, theory- building, policy formulation and analysis and scholarly research and strategy design.

PhD Communication Theory and Research

PhD in Communication Theory and Research is offered in Standford University. According to the Standford University official website, this program prepares the students in conducting original researches on communication processes and effects within the tradition of social and behavioral sciences.

This program gives importance to the students who are part of the academe. In the program description of PhD Communication Theory and Research, it is cited that most of the graduates of this program enter academic teaching and research careers. Also, one of the requirements of this program is to be a successful teaching assistant or instructor for at least two quarters. The teaching requirement for this program must involve one of the courses in the undergraduate majorship or the Mass Communication and Society course. (http://communication.standford.edu/phd/index/html)

As described in Standford University website, the requirements for a student to be given the PhD Communication and Research title, he or she must have finished all the academic requirements of the program within 4 years and during which, fulfilling University residency requirements. The program also requires a grade of B+ or above in the departmental course requirements. Since the program is research based, a dissertation is also required prior to two pre- dissertation research projects.

MA Art Education, Online

Boston University's (BU) Master of Arts in Art Education (MAAE) is an online program under the College of Fine Arts. BU's official website said that this program is intended to shape the careers of their students and meet their personal and professional aspirations. The program offers courses that are intended for art teachers. There are two specializations that MAAE offers" Artist-Teacher and Arts Education Leader.

Graduates of MAAE in BU are expected to develop special skills to apply in various areas of teaching art, child development, creative leadership and curriculum planning.

Primarily, MAAE Online degree is intended to Art Education Leaders, Artist Teachers and Citizen Artists. However, the course is originally focused on Artist Teachers to help continuous growth of Artist teachers who believe in the value of art education in schools and society. (http://arteducation.bu.edu/)



Need Analysis

In order to cater for the learners' specific purpose, it has become urgent to collect information about the learners: their needs and wants. For so doing, relevant techniques as well as procedures have been developed by needs analysts. These techniques have been borrowed and adopted from other areas of training, particularly, those associated with industry and technology.

Needs analysis as a method of not only analyzing the needs of given individuals or communities; but also as a tool that can help in predicting future decisions about a targeted population (Badre, 2005).

Distance Learning

"Distance education gives less opportunity for direct feedback from students, thus, it has been necessary to develop formal procedures for programme evaluation. In the future it would be desirable that also individual evaluation projects were carried out with reference to research and evaluation carried out in other settings and report result in ways to give maximum transfer and development effects to the field in general." (Rekkedal, 1994)

Distance Learning or distance education is a special type of learning in which teaching methods and technology aims to teach individuals who are not physically present in a traditional education system (Khan, 1998). As a relatively new field of study, it has been important for distance education to define itself and build up a theory base for its research.

Synthesis

Communication plays a very important role especially in education. Also, the Commission on Higher Education recognizes the role and importance of Communication education through their CHED CMO No. 27 Series of 2011, in the Philippine setting, there is no university which offers any higher degree in communication education. The possibility of offering it through Distance Learning has a potential.

FRAMEWORK

The researcher used the Systems Theory to help in answering the objectives of the study. According to Whitchurch and Constantine (1993), this involves the basic idea that objects in the world are interrelated to one another. It is concerned with the problems of relationships, of structures and of interdependence rather than with the constant attributes of object (Khatz and Khan, 1966). Webster on the other hand defines system as a "regularly interacting or interdependent group of items forming a unified whole," which "is in, or tends to be in, equilibrium". Negandi (1998) states that "a system's attributes, which are the interdependence and interlinking of various subsystems within a given system, and the tendency toward attaining a balance or equilibrium forces one to think in terms of multiple causation in contrast to the common habit of thinking in single- cause terms". Systems approach would assume that the important features of phenomena are emergent and based on complex interrelations among components such as that the whole is greater than the sum of its parts (Borman, nd)

Stufflebeam (1960) developed a useful approach in the study of the Systems Theory as applied in education known as Context, Input, Process, Product approach. This approach involves evaluation of the Context, Input, Process and Product in judging a program's value. This is also a decision- focused approach for evaluation. It emphasizes the systematic provision of information for programmed management and operation.

Fig. 1. Theoretical Paradigm

CONTEXT PRODUCT INPUT PROCESS Data on: Data on: Data on: Data on: Goals and Information in Objectives making the decision: Information in Using the relevant resources in order to overcoming an Create a new environ achieve the objectives anticipating program ment of the study. procedural difficulties. Change the actual program conditio Modify/ n revise unmet Continue needs program unused Discontinue opportun the program ities 2. Problems

Conceptual Framework

The proposed offering of Doctor in Communication Education applied the concepts from the Theoretical

Framework of the study in which Context, Input, Process and Product are connected to each other.

The Paradigm starts with the context in which the input is anchored into. As a university, PUP believes that education is an instrument for the development of individuals while promoting citizenry and nation-building. It believes that the meaningful growth and transformation of the country are best achieved in an atmosphere brotherhood, peace, freedom, justice nationalist- oriented education imbued with the spirit of humanist internationalism (www.pup.edu.ph).

The inputs needed in order to achieve the described products or outputs are the objectives of the study. Input includes determining the need for a program and its marketability as well as the feasibility of offering it and the preparedness of the institution.

The context and the input will be used in the process phase. Based on the context and the input, a benchmark study will be undertaken through surveys. To achieve the qualitative data interviews with the implementers will be done.

Fig. 2 Conceptual Paradigm.

RESEARCH DESIGN

CONTEXT **INPUT PROCESS PRODUCT** Data on: Data on: Data on: Data on: Benchmark Doctor in Philosophy, Need for the Communication vision, mission new program study and goal of Education program Marketability Compilation of PUP and PUPthrough Distance of the new related studies Learning OU program and literature University Feasibility of Survey on policies implementatio potential clients **Preparedness** Interview with of the the University implementors

The researcher used the both Qualitative and Quantitative approach of research. Ospina (2004) said that Qualitative Research is used to explain a social phenomenon on the perspective of the involved participants rather than explaining it from the outside. This research design involves data collection within the natural settings and the key data collecting instruments are the researchers. The purposes of this study are to describe, to interpret, to verify and to evaluate (Ospina, 2004). Qualitative research on the other hand, is used to present and analyze and interpret the answers of the informants of the study. The researchers believe that data should also be analyzed and interpreted up to some limitation in order to attain the desired goal of the study. In this study, the researchers utilized the qualitative approach in order to verify the data gathered using the quantitative approach (Burns and Grove. 1994).

Furthermore, the researcher used the descriptive method of research to describe and explain the phenomenon by collecting information and knowledge through structured questions. Through this method, the researcher generated answers to the problem of the study. This design is the most appropriate design to obtain needed information.

Research Methods

To gather quantitative data, the researcher distributed questionnaires to the respondents. The researcher sent request letters and survey questionnaires to all the colleges and universities in Manila that offer Communication courses for the communication instructors to answer. This will determine the marketability of the program as well as the need for it.

In order to gather qualitative data, the researcher conducted a focus interview with the informants of the study. The researcher scheduled an interview with the informants through a request letter together with the interview guide which contains questions on the feasibility of the program (PUP President), preparedness of PUP-OU in offering the program (PUP-OU Director), and their recommendations for the program.

Sampling Procedure

The respondents of the study on the other hand, was chosen through the use of Stratified Random Sampling Technique, a sampling method where in the population is divided into sub-population called strata (Patton, 1990). Through the use of Slovien's Formula, the researcher will identify the number colleges and universities in the Manila that offers communication courses. From the identified colleges and universities, the survey questionnaire was distributed to five (5) communication instructors who are currently enrolled and already obtained their master's degree.



For the focus interview, Purposive Sampling was used in choosing the participants. The sampling units were selected subjectively by the researcher who attains to obtain a sample that appears to be representative of the population. The chance that a particular sampling unit will be chosen will be selected as the samples depends upon the subjective judgment of the researcher (Patton, 1990).

The researcher has chosen the PUP- OU Director to be included in the study as the key informant. She was chosen according to her knowledge and understanding of the PUP System. The information that she has given is be significant to determine the feasibility of the offering as well as the preparedness of the institution.

Instrument

The researcher came up with a self-made survey questionnaire and interview guide based on the related literatures and studies. The instruments also underwent a pretest to check for its validity. There were 5 communication instructors in universities outside Manila who answered the questionnaire as pretest.

A survey questionnaire is a set of questions that require set of rules or directions to avoid vague answers (Ilagan 2009). It was made in a way that the respondents are able to answer them easily. In this study, the survey questionnaire has 3 parts. The first part includes the profile of the respondents. This part establishes the credibility of the respondents in participating in the study- that they meet the criteria set by the researcher in the study. The second part of the survey questionnaire determines the need for the said program. While the last part of the survey questionnaire consists of questions that will determine the marketability of the program.

For the Focus Interview (FI), the researcher will interview the key officials of the Polytechnic University of the Philippines and the Polytechnic University of the Philippines- Open University. FI is a technique used to collect qualitative data by setting up a situation (the interview) that allows a respondent the time and scope to talk about their opinions on a particular subject (http://www.sociology.org.uk/methfi.pdf). The researcher will schedule an interview with the informants. The researcher will use an interview guide in order to facilitate the interview.

Data Collection Procedure

The survey questionnaires were sent by the researcher to the different target schools through their department heads with a cover letter/ letter of request. The researcher explained the objectives of the research and the directions in filling up the survey questionnaires. The researcher will give the respondents 1 week to distribute and answer the questionnaire.

The Focus Interview was conducted on the convenient date and time of the interviewee. The researcher provided a permission letter to conduct an interview to the PUP- OU Director. The researcher used a digital recorder in order to have an accurate documentation of the interview. This was held in their respective offices.

Statistical Data Treatment

The study utilized first- hand data that came from the chosen respondents who answered the survey questionnaire and who participated in the interview.

The quantitative data in this research on the survey questionnaire (Part 1 and 2) was measured by computing the percentage. According to Knapp (2010), percentage is a numerical expression that includes a percent sign, with 100 assumed as the denominator.

Statistically, the percentage is calculated using the following formula:

P= x 100where: FP= Percentage NF= Frequency

N= total number of respondents

The researcher determined the need and marketability of the program by getting the percentage. This means the higher the percentage the higher the need and marketability for the said program. For the qualitative data, the key findings on the result of the FI was determined, analyzed, and written in a transcription. After transcribing the discussion, the data was analyzed thoroughly by reviewing the digital audio recording from the session and by identifying the important issues and concerns in the FI.



DATA PRESENTATION, ANALYSIS AND INTERPRETATION

Table 1 shows that most (45%) of the respondents are teaching the subject Communication Research among college students. On the other hand, the subject Advertising is being taught by 37% of the respondents. The subjects Broadcasting and Journalism is being taught by 30% of the respondents. 22% of the respondents said they are teaching Introduction to Mass Communication. And the rest of the subjects were taught by the minority of the respondents.

Demographic Profile of the Respondents

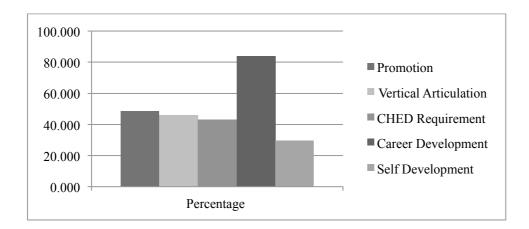
Table 1. Communication subjects taught by the respondents.

| Subject | Frequency | Percent |
|---|-----------|---------|
| Advertising | 10 | 37 |
| Audio Video Technique | 2 | 7 |
| Broadcast Journalism | 2 | 7 |
| Broadcasting | 8 | 30 |
| Communication Campaigns | 2 | 7 |
| Communication Consultancy | 1 | 4 |
| Communication Research | 12 | 45 |
| Communication Society | 2 | 7 |
| Communication Theory | 3 | 11 |
| Crisis Communication | 1 | 4 |
| Developmental Communication | 2 | 7 |
| Film | 3 | 11 |
| Information and Communication Technology | 2 | 7 |
| Introduction to Mass Communication | 6 | 22 |
| Journalism | 8 | 30 |
| Media Criticism | 1 | 4 |
| Media Ethics | 4 | 15 |
| Media Management | 3 | 11 |
| News/ Feature Writing | 2 | 7 |
| Organizational Communication | 2 | 7 |
| Practicum | 2 | 7 |
| Program Planning and Building | 1 | 4 |
| Public Relations | 6 | 22 |
| Radio Production | 5 | 19 |
| Speech | 2 | 7 |
| TV Production | 3 | 11 |
| Writing (Technical/ Scientific/ Creative/ Trimedia) | 5 | 19 |

This shows that the respondents are all communication educators. As mentioned, communication education in this study is referred to as the profession in teaching communication in the tertiary level.

Graph 1 shows that 83.78% of the respondents take Master's degree for career development. 48.65% of the respondents said that they are taking or have taken Master's degree for promotion. Vertical Articulation is the reason of the 45.95% of the respondents. While 43.24% of the respondents said that it is because CHED requires them in teaching college. And the remaining 29.73% said that it is for their self development.

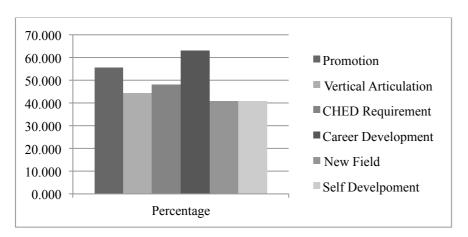
Graph 1. Purpose of the respondents in taking Master's degree.



This graph shows that the reasons of the respondents in taking Master's degree is not just because of the government regulation and university policies. In order to teach in the tertiary level government and universities require teachers to finish Master's degree, at least. Though they do not see it as a requirement, most of the respondents in the study believe that for them to develop their careers as communication educators, they need to take Master's degree.

Graph 2 shows the purpose of the respondents in taking Doctorate degree. This shows that 62.96% of the respondents said that they are taking or have taken a Doctorate degree for career development. 55.56% said it is for promotion. 48.15% and 44.44% said that it is because of the CHED requirement and vertical articulation respectively. 40.74% said that it is for their self development, as a new field.

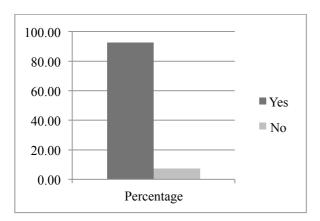
Graph 2. Purpose in taking Doctorate degree.



This graph shows that most of the reasons of the respondents in taking a Doctorate degree, like the reason in taking Master's degree, is for career development and promotion. Though it is not a requirement of the universities and colleges to finish a doctorate degree in order to teach in the tertiary level, the respondents still want to develop their careers as communication educators by pursuing a post graduate degree.

Needs Analysis

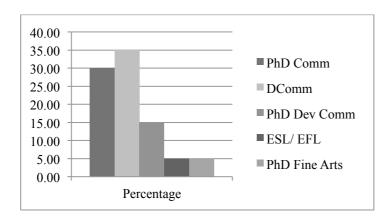
Graph 3.1. Respondents who intends to pursue a PhD or Doctorate degree.



The graph shows that the communication educators in this study intend to pursue a PhD or Doctorate degree. This means that there is a probable need and market for a Doctorate program.

Graph 3.2 shows that most of the respondents (35%) intend take Doctor in Communication (DComm). While 30% and 15% intend to take PhD in Communication (PhD Comm) and PhD in Development Communication (PhD Dev Comm) respectively. And 10% of the respondents intend to take a non-communication related field.

Graph 3.2. Programs that the respondents intend to take for PhD or Doctorate.

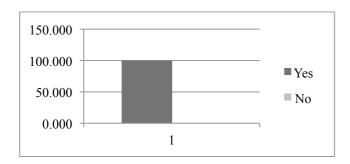


This shows that most of the communication educators in the study prefer a vertically aligned doctorate degree. Most of them prefer DComm which is under UP-LB Open University. This means that the respondents might want to enroll in DComm for independent learning.

Needs Analysis

Graph 4 shows the interest of the respondents in taking DCommEd. Among all respondents, 70.37% of the respondents said that there will be enrolling in the program DCommEd should this be offered. Whereas 29.63% of the respondents said that they are not enrolling.

Graph 4. Respondents interest in enrolling in DCommEd should this be offered.

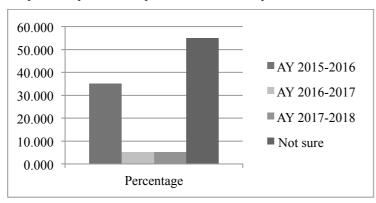


This shows that most of the respondents intend to enroll in the program DCommEd should this be offered. This graph shows the potential market for the said program should this is offered.

Graph 5 shows that the 55% of the respondents are not yet sure when will they enroll in the DCommEd program should this be offered. 35% of the respondents intend to enroll in the program if offered by AY 2015-2016. While others intend to enroll by AY 2016-2017 (5%) and AY 2017-2018 (5%)

Marketability

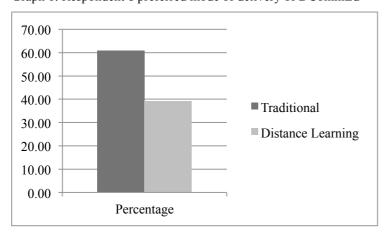
Graph 5. Respondents response on when do they tend to enroll in the program DCommEd.



This shows that though there are majority of the respondents tend to enroll in the program DCommEd, most of them (55%) are not yet sure when to enroll. Whereas 35% of the respondents tend to enroll in the program in the next academic year, should this be offered.

Graph 6 shows that 60.87% of the respondents prefer traditional mode of delivery than distance learning (39.13%).

Graph 6. Respondent's preferred mode of delivery of DCommEd



The graph shows that respondents prefer traditional mode of delivery of DCommEd over distance learning. Shen (2007) described traditional mode of learning as face- to - face education in a classroom setting while distance learning (also known as e - learning) is the non - face - to - face learning which is usually done with the aid of internet and technology.

Feasibility

It is not a problem to offer DCommEd in PUP Open University according to Dr. Carmencita Castolo, Director of PUP Open University. Considering curriculum, faculty, administration and support services, it is feasible. Dr. Castolo said "Considering that PUP has less than a hundred programs at present, offering DCommEd is not a problem in terms of the items below [Curriculum \, Faculty, Administration and Support services] However, the biggest problem will be the budget to offer the program both in the graduate school and the open university." The only consideration that might hinder this proposal according to Dr. Castolo is the budget. It has always been a consideration to PUP in all its operations.

PUP the largest university in the Philippines in terms of population. It houses more than 60,000 students according to CHED records (2013). The great population is attributed to its low tuition fee which is PhP 12.00 per unit, the lowest in the country. The University, being a state university, relies primarily on government subsidy (PUP, 2013).

Preparedness

In the same interview, PUP Open University Director, Dr. Castolo said that PUP Open University is prepared in offering DCommEd in terms of curriculum, faculty, administration and support services. But again, budget is a primary consideration.

PUP Open University is willing to propose a DCommEd curriculum in the future. There is no DCommEd program yet in the traditional mode (Graduate School) which means that there is also no DCommEd in the Open University. In PUP, according to Dr. Castolo, programs offered in the Open University are also offered in the traditional mode (Undergraduate and Graduate School).

There are also qualified faculty members with required educational backgrounds in teaching post- graduate courses who can handle DCommEd subjects. The current faculty members teaching Master's and Doctorate degrees both in PUP Open University and PUP Graduate School are graduates of Doctorate degrees and with relevant experiences. Dr. Castolo mentioned that they are sharing most of the faculty members from the PUP Graduate School. Though there are faculty members in the Open University who are not teaching in the Graduate School, still, a number of faculty members are teaching in both. Most of the faculty members teaching in the Open University who are not in the Graduate School are industry practitioners.

There are also qualified faculty members and administrators in PUP Open University who can be program chairs and heads of DCommEd. Dr. Castolo cited that most of the faculty members of the Open University teaching Master in Communication also hold relevant post graduate degrees and relevant administrative positions in PUP.

PUP can also provide support services required in any Doctorate degree according to Dr. Castolo. Having offered several Master's degree (both in Open University and Graduate School) and Doctorate degree (in Graduate School), PUP support services are established and can be adopted.

CONCLUSION

Based on the objectives of the study, it is therefore concluded that there is a need for the Doctor in Communication Education program. The communication educators involved in this study needs a vertically aligned program for their career development.

There is a market for the DCommEd program. The respondents of this study intends to enroll in this program should this be offered. But, they are not yet sure when will they enroll. Also, most of the respondents prefer the traditional mode of delivery of the program over distance education.

It is feasible to offer DCommEd in PUP Open University. PUP Open University Director said that PUP can offer the program in terms of curriculum, faculty, administration and support services provided that proper budget will be allocated for the said program.

PUP Open University is also prepared in offering the DCommEd. The administration is willing to propose for a curriculum. There are qualified faculty members and administrators in the University. And support services are provided for the DCommEd program.

RECOMMENDATION

This study recommends that a curriculum should be created to further strengthen the proposal. This curriculum must include subject offerings based on the recommendations of communication educators who are the potential enrollees of DCommEd program.



The University must also look into other post graduate degrees that can be offered via distance learning. With this, it will be more convenient for the students and teachers.