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Students' Readiness For Online Learning: A Case Study From The Faculty Of Education, University Of Malta[1].

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Abstract:

The 21st century challenges traditional higher education on several fronts among them education delivery and institutional sustainability. Online learning proposes new ways for better resource utilisation whilst providing desirable methodologies in the domain of learning. This study investigates students' readiness to accept online learning modes and differentiates from previous research by focusing on the full-time undergraduate in the Maltese scenario where physical distance is not considered a barrier. A quantitative research was conducted on students in full-time pre-service teacher education at the University of Malta. Students' level of connectivity; technical skills; and perceptions, attitudes and intentions towards online learning; were investigated. Results indicate that students are mostly technically ready both in terms of connectivity and skills which resolve into positive perceptions, attitudes and intentions. However, the study also reveals that previous experience of such modes is very limited amongst students.

Introduction

The 21st century challenges the traditional Higher Education Institution (HEI). A new dynamic environment has emerged which is leading to a paradigm shift for both the learner and the educational institution. This new environment is being shaped by the loss of predictable resources, globalisation and rising competition, stakeholder discontent and distrust, and technology (Nedweck, 1999). The traditional HEI is challenged on both fronts of education delivery and institutional sustainability.

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Both in Malta and other European countries, the number of students joining undergraduate level courses has been on a sharp rise for the past decades. Lectures are being held in larger lecture theatres as lecturing space is becoming less available and student-teacher interaction is next to none. Improving the current scenario is hindered by shrinking funds and resources in relation to the ever increasing student intakes.

Universities are making substantial investments in new technologies. Technology has the potential of providing improved presentation and interactivity. But perhaps, the biggest technological opportunity lies in Internet which is gaining momentum with its proliferation and increase in ease of use. Internet provides unprecedented ways for education delivery. Online learning promises new ways for better resource utilisation whilst providing desirable flexible methodologies to the advantage of the learner, the teacher and the institution. This study views online learning as learning facilitated on-line (Internet) through network technologies (Garrison & Anderson, 2003).

Literature claims that online learning environments can realise the idea of the autonomous and self-regulated student. Unlike traditional instructional media, web based media permits more flexibility in study. There is no need for fixed learning sequence in the online Learning environment, but individual learners can make their own decisions to meet their own pace in accordance with their existing knowledge and learning goals (Lin & Hsieh, 2001). In this light, various literature links online learning with a constructivist pedagogy (Garrison & Anderson, 2003; Iyer, 2003; Lin & Hsieh,2001; Peters, 2003; Hase & Ellis, 2002).

However, the definition as adopted by this paper, could be satisfied by the inclusion of any degree of network technology in learning. Although it could be argued that the true potential of online learning lies in the flexibility offered to the student, the teacher and the institution, there is no definite mix as how the ideal online learning should be. It is therefore the author's intention to distance this research from particular pedagogic models in order to provide an objective readiness investigation irrespective of what mode or blend could be adopted. This research is therefore limited in describing readiness for new modes and blends of learning.

This study adopts the definition for readiness by Fullan (1999).

> "Readiness involves the… practical and conceptual capacity to initiate, develop, or adopt a given innovation."
>
> Fullan, p.63, 1999

The study identifies: (i) Technical readiness; and (ii) Perceptions, attitudes, and intentions towards online learning; as key factors for investigation.

Online learning, with its origins as an innovation on distance education, has in the majority of cases been adopted at post-graduate level. Most of the literature produced in the field has therefore focused on the scenario where the learner is gainfully employed and is undergoing a postgraduate course so as to better his/her career. This learner is usually mature and enrols in an online course voluntarily and usually against payment or direct sponsorship. In such scenario, the learner usually has other

commitments arising from a full time job and family. In this context, online learning, acts as a substitute to conventional education which otherwise would not have been possible in the first place.

In contrast, a literature gap exists in the domain of online learning at undergraduate level. The learner reading for a first degree is a full time student, and is usually expected to attend campus on a daily basis. Such students have passed their previous years of formal education in face to face mode. This implies that the student will need to learn and develop new traits so as to succeed in this new mode of learning. Students might resist or accept such change depending on the perceived value gained by online learning over the traditional face to face modes.

Technical Readiness

Literature suggests that successful online students need to have accessibility to the medium (connectivity) and own the respective skills. However, little literature dares to quantify the level that constitutes readiness for successful enrolment in this mode of learning. Such limitation can be attributed to the diversity of technologies used in online courses coupled with different pedagogic methodologies and modes.

Mc Connell (2000) identified three levels of computer skills that are ideally required for successful online learning. These consist of word processing skills; telecommunications skills and conferencing skills. Word processing skills consist of the ability to prepare text items, responses and personal messages. Telecommunications skills include the user's ability to set and use communications hardware and software. Conference skills encompass the learner's ability to make use of the available communication channels available.

Salmon (2003) identifies five skills that parallel her five stage model for teaching and learning online. Salmon argues that learning about ICT and learning with or through ICT should not be distinguished from actual topic learning. She believes that participants learn about the use of computer networking along with the actual course. However, she still identifies stage 1, connectivity and the ability to use the Internet, as prerequisites for online learning. So whilst the higher skills can be acquired throughout the course, stage one needs to be obtained before the learning in such mode can initiate.

Warner, Christie and Choy (1998) identified confidence in the use of Internet and computer-mediated communication as a critical factor for online learning. Research indicates that personal subjective feelings and beliefs towards computers have a stronger impact on computer competence than certain objective measures of computer experience and intensity of computer use. Such results indicate that though users might have connectivity and report high usage, they still might lack the competence or capacity to adopt the technology.

Technology acceptance: Theoretical background

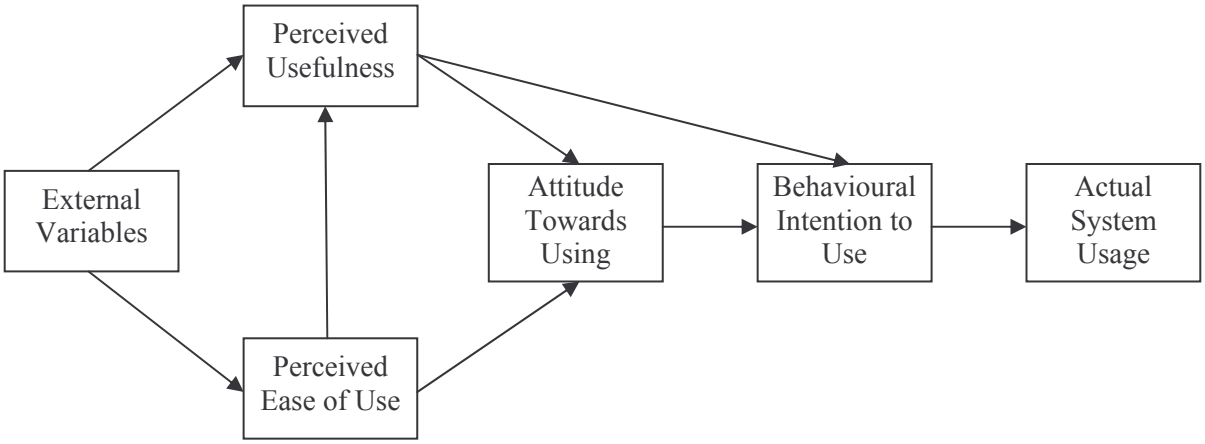
A principal component in determining whether a learner is ready for online learning methods is his propensity to accept and adopt it, and therefore, the learners'

perceptions, attitudes and intentions. No research has been encountered that has analysed online learning readiness from this perspective.

The Technology Acceptance Model (TAM) is specifically aimed at predicting and explaining user acceptance of technological systems (Davis, Bagozzi & Warshaw, 1989). This model, derived and adopted from the previous Theory of Reasoned Action (TRA) (Fisbein & Ajzen, 1975), has been used by researchers to study individual's acceptance of technology and is considered as a strong predictor for the intention to use a technology in various organisational and personal situations. TAM proposes that *Perceived Usefulness* and *Perceived Ease of Use* are most relevant to computer acceptance behaviour (Figure 1).

- *Perceived Ease of Use* is the believed degree of learning effort required by an individual to use a technology.
- *Perceived Usefulness* refers to believe that performance will improve by using the technology.
- Attitude is an individual's feeling or emotion about using the technology.

Figure 1 - The Technology Acceptance Model (TAM)



Source: Davis, Bagozzi & Warshaw (1989)

Research indicates that the Technology Acceptance Model is applicable for online learning technologies[2] (Selim, 2002; Soong, Chan, Chau & Loh, 2001; Stoel & Lee, 2003). Empiric research evidence in this domain reveals that:

- *Perceived Usefulness* has significant direct impact on acceptance (Selim, 2002; Soong et al., 2000; Stoel & Lee, 2002);
- *Perceived Ease of Use* significantly affects the students' usefulness directly and acceptance indirectly (Selim, 2002; Soong et al., 2000; Stoel & Lee, 2002); and
- *Intention* to use is a significant predictor of actual usage of the technology (Selim, 2002).

[2] Literature referred has tested TAM for 'Web-based Courseware' (Stoel & Lee, 2003), 'Course Website' (Selim, 2003) and 'Online Course' (Soong, Chan, Chau & Loh., 2001). However all terms fit within the term Online Learning as defined in this research.

Stoel and Lee (2003) found empiric evidence that longitudinal exposure increases student perceptions that online learning technology is easy to use. This research also showed that experience leads to an increase in positive attitude towards the technology and that strong positive attitudes manifest themselves as high usage frequency.

Methodology

Instrument

A questionnaire was used as a method for data collection. The questionnaire[3] aimed to capture the students':

- demographics – age, gender, course and course year;
- degree of skill readiness - the basic skills needed to use the Internet successfully;
- degree of connectivity - the degree to which the student can gain access the Internet as the base of an e-learning platform;
- previous experience –experiences in online learning modes;
- perceptions, attitudes towards online learning; and
- behavioural intentions for voluntary enrolment in online learning modes.

Sampling

The population in this study consisted of students in pre-service teacher training at the Faculty of Education. The selection of a segment (teacher training) from the whole higher education student population was determined to reduce irrelevant interferences which may possibly arise from different Faculty/Course cultures and values. Though in doing so the generalisability of results has been limited, the aim of this research was not compromised as the scope was of an exploratory nature.

The Faculty of Education delivers two main pre-service teacher training courses namely the B.Ed.(Hons.)[4] programme, which is delivered over a four year span and the PGCE[5] postgraduate certificate programme, which is delivered in one academic year. The population in this study consisted of students from both programmes.

The sample amounted to a total of 395 students and was made up of:

- all first year B.Ed.(Hons.) students (N-primary = 58, N-secondary =98);
- all fourth(final) year B.Ed.(Hons.) students (N-primary = 30, N-secondary =96);
- all third year B.Ed.(Hons.) students in Primary track (N = 51); and
- all PGCE students (N = 62).

As outlined above, B.Ed.(Hons.) students fall under two groups being the primary track and secondary track. The primary track prepares students to teach in primary schools and therefore specialise in early and middle years education. Students who

[3] Items of the questionnaire are included in Appendix
[4] Bachelor of Education (Honours)
[5] Postgraduate Certificate in Education

choose to study in the secondary track aim to teach in secondary schools and will further need to specialise in a particular subject.

Students at the beginning (first year) and at the final year of the B.Ed.(Hons.) programme were selected. This was done to contrast course year and age extremes. However, third year 'primary area' students were also included to compensate for the fourth year 'primary area' students who were small in number. Fourth year B.Ed.(Hons.) 'primary area' students were also the only group who had experienced an official online component of the course. All PGCE students were included in the sample. PGCE students were more diverse since they originated from diverse disciplines and had their first degree experiences from different faculties.

Although the PGCE course is a postgraduate course, its construct is very much similar to an undergraduate. It is a full time certificate which attracts mostly students who have just completed their first degree with or without honours. PGCE students are therefore already well read in a particular area and have been attracted towards developing a teaching career.

Outcomes and Results

Out of 395 distributed questionnaires, 212 were returned thus a 54% response rate. This amounts to 33% of all students in teacher training courses (B.Ed.(Hons.) and PGCE) within the Faculty of Education.

Table 1 - Sample distribution by group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PGCE	32	15.1	15.4	15.4
	B.Ed.(Hons.) Primary -1st Year	33	15.6	15.9	31.3
	B.Ed.(Hons.) Secondary -1st Year	57	26.9	27.4	58.7
	B.Ed.(Hons.) Primary -3rd Year	29	13.7	13.9	72.6
	B.Ed.(Hons.) Primary -4th Year	11	5.2	5.3	77.9
	B.Ed.(Hons.) Secondary -4th Year	46	21.7	22.1	100.0
	Total	208	98.1	100.0	
Missing	System	4	1.9		
Total		212	100.0		

Connectivity

It is clear that the respondents are connected. Almost all students claimed to connect to the Internet on a frequent basis and have an Internet connection at home. 95% of respondents claim that they access internet from home, 48% from campus and 11% from other places. 48% of students claimed to access internet only from home whilst 44% claimed to access the internet from home and campus. Only 1.4% of students claim that they only access the internet from campus.

Student's access via broadband conforms to national statistics where narrowband (dial-up) is twice more diffused than broadband (NSO, 2004). Half the sample claimed to access Internet from both campus and home. High connectivity was also reflected in the number of hours students spend online. Few students (10%) claimed to spend less than one hour online per week and as expected, students having

broadband connection at home spend more hours online than those with a narrowband connection (dial-up).

Table 2 - *Type of Connection* * *Hours Online per Week* Cross-tabulation

		Hours Online per Week						Total
		0	0-1	1-5	5-10	10-15	15+	
Type of Connection	Dial-up	4	10	65	30	11	7	127
	Broadband	1	2	15	16	12	27	73
	No connection	0	2	3	1	0	0	6
Total		5	14	83	47	23	34	206

Results also indicate that students with a dial-up home connection make more use of Internet on campus than students with broadband home connection. This might indicate that a dial-up connection at home is not meeting students' needs and that students opt not to have a broadband connection at home not because of lack of need, but due to other factors such as the high costs involved.

Technical skills and exposure

Students seem to have adequate general technical skills and confidence and it is clear that students are not alien to the technologies usually used in online learning. Only 9% of respondents claimed that they had no computer training[6] at all whilst 73% had a basic computer course (ECDL), 18% had a certification in computing at Ordinary, Intermediate or Advanced level.

Although most students had never used the Internet as part of a formal online learning environment, students still showed that they made frequent usage of the Internet to satisfy their academic needs. With few exceptions, students claimed to use the Internet for course related research on a frequent basis.

Students seem to use the Internet as a means of communication both with peers and University staff. All students claimed to have mastered email (with attachments) whilst a good majority claimed to have the necessary skills to communicate via chat. However, few students had the skills needed to participate in a forum (bulletin boards - asynchronous conferencing). This can be attributed to the fact that students may have no exposure to such interaction mediums or are not aware of such modes.

[6] The instrument purposefully excluded all the compulsory computer courses done throughout the course years both in the B.Ed.(Hons.) and the PGCE programmes.

Figure 2 – Percentages for *Internet Usage* items

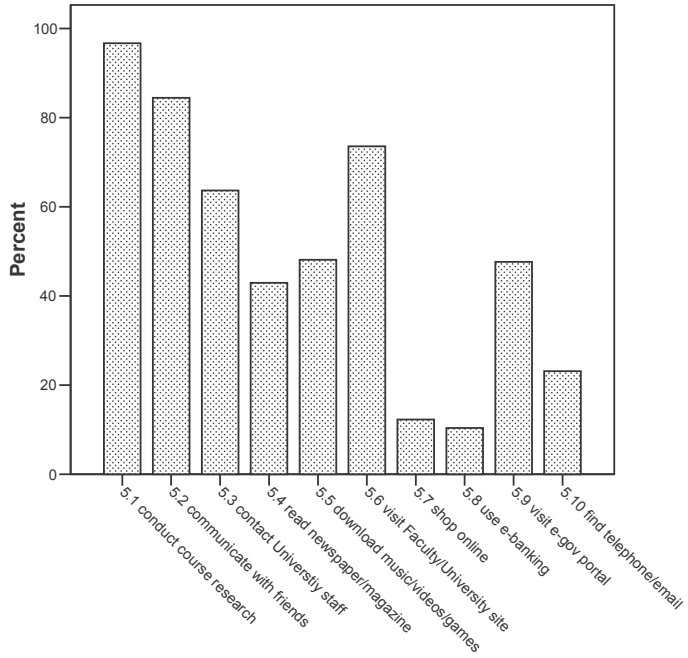
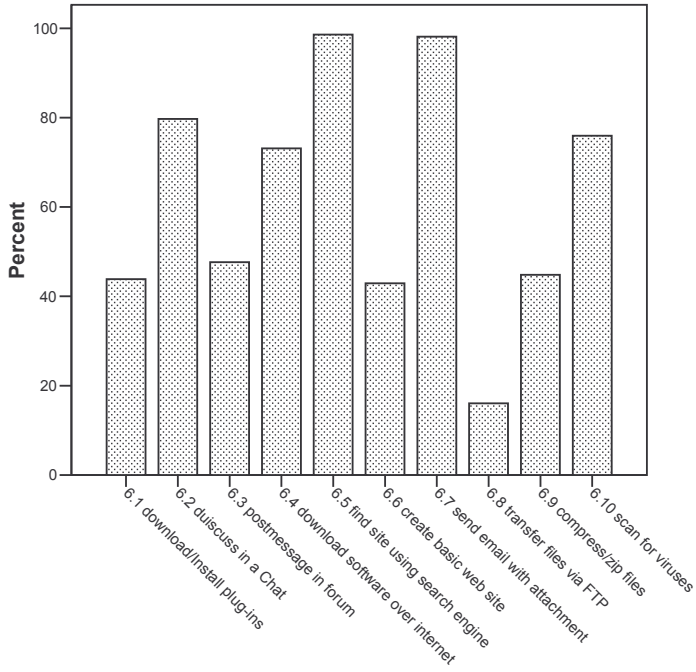


Figure 3 – Percentages for *Skills* items



When these findings are mapped on required skills for online learning identified by McConnell (2000) and Salmon (2003), students perform well. Students seem to master adequate levels of Internet skills and are already exposed to the Internet as a tool for their course needs. Students also seem to be familiar with the more widely used telecommunication technologies both synchronously, such as chat, and asynchronously, such as email, though they lack online conferencing skills.

Perceptions and Attitudes

Results indicate that the Technology Acceptance Model (Davis, Bagozzi & Warshaw, 1989) was a successful model to study student's attitudes and intentions towards online learning. Although the research question did not intend to test the validity and fitness of this model, the major factors with relative relations theorised by the Technology Acceptance Model were recorded and concords with previous research (Selim, 2002; Soong et. al., 2000; Stoel & Lee, 2002).

Perceived Ease of Use, Perceived Usefulness and *Attitude* are described in tables 3, 4 and 5 respectively. *Perceived Ease of Use* items obtained a Cronbach's alpha of .735; *Perceived Usefulness* items obtained a Cronbach's alpha of .759; and *Attitude* items obtained a Cronbach's alpha of .892 where an α value higher than .70 is considered as satisfactory for internal reliability (Hair, Anderson, Tatham, & Black, 1998). All three factors were collapsed to single dependable values being *PU*, *PEOU* and *Attitude* that represent their means (table 6).

Table 3 – *Perceived Ease of Use* items descriptive Statistics

		Mean	Std. Deviation
PEOU 1	Learning to use the new technology would not be easy	3.56	.968
PEOU 2	Communicating via internet would be difficult	3.57	1.004
PEOU 3	Using forums (bulleting boards) and email would be complex	3.47	.968
PEOU 4	Instructions given by the tutor would be easy to follow	3.32	.862
PEOU 5	Downloading course materials would be a simple task	3.95	.925
PEOU 6	It would be easy to find the information I need	3.98	.919

Table 4 – *Perceived Usefulness* items *d*escriptive statistics

		Mean	Std. Deviation
PU 1	I would be able to schedule my work better	3.47	1.097
PU 2	I would waste less time traveling and finding a parking	4.30	.906
PU 3	Tutor would be more accessible	3.32	1.010
PU 4	The quality of the course would not improve	3.1	.923
PU 5	My grades would not improve	2.85	.906

Table 5 – *Attitude* items *d*escriptive statistics

		Mean	Std. Deviation
A 1	Learning would be fun	3.39	1.065
A 2	Internet would provide an attractive learning environment	3.5	.999
A 3	I think this learning environment is not for me	3.36	1.214
A 4	I would not learn more	3.24	1.045
A 5	I would not enjoy myself studying in this environment	3.17	1.257

Table 6 – *Attitude, Perceived Ease of Use and Perceived Usefulness* descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Attitude	208	1.00	5.00	3.334	.937
PEOU	201	2.00	5.00	3.66	.609
PU	206	1.40	5.00	3.408	.695
Valid N (listwise)	195				

Intention to enroll in online courses

According to the Technology Acceptance Model (Davis, Bagozzi & Warshaw 1989), behavioural intention should reflect Attitude and *Perceived Usefulness*. In this research two Intentions were measured. The first Intention[7] was meant to capture student intention within their current course structure. The second intention[8] was intended to capture subjects' intentions as regards online learning independently from their current academic course, university structure and learning needs. A total of 69.8% and 74.1% responded positively for Intention 1 and Intention 2 respectively.

Online Learning - Acceptance

The Technology Acceptance Model theorises that subjects build their perceptions on external factors. Therefore, according to this model, it can be hypothesised that students base perceptions and attitudes towards online learning on external factors. This study has investigated connectivity, technical skills and previous experience as external factors within this model. Interesting results were obtained indicating that these factors with some exceptions do in fact interact significantly with perceptions and attitudes. It is clear that the same factors discussed above and considered essential for online learning contribute in some way to the student's formation of perceptions and attitudes.

As expected *Attitude* correlates with *Perceived Ease of Use* ($r=.604$, $p < .01$) and Perceived Usefulness ($r=.754$, $p < .01$). *Attitude* also significantly correlates with *Total Internet Usage* ($r=.367$, $p < .01$) and *Total Skills*($r=.322$, $p < .01$). This indicates that attitude is strongly related to perceptions. The higher the *Perceived Ease of Use* and *Perceived Usefulness* the higher is the *Attitude*. Similarly, *Perceived Ease of Use* significantly correlates with *Total Internet Usage* ($r=.397$, $p < .01$) and *Total Skills* ($r=.416$, $p < .01$). This indicates that the more a subject uses the internet and possesses technology skills, the higher *Perceived Ease of Use* is most likely to be. *Perceived Usefulness* also significantly correlates with *Total Internet Usage* ($r=.336$, $p < .01$) and *Total Skills* ($r=.261$, $p < .01$). This indicates that *Perceived Usefulness* like *Perceived Ease of Use* also increases with internet usage and technology skills. However the relation here was weaker.

Significant differences between *Hours Online per Week* were attained for *Attitude* ($F(5,201) = 3.675$, $p = .003$); *Perceived Ease of Use*($F(5,194) = 3.404$, $p = .006$); *Perceived Usefulness* ($F(5,199) = 2.774$, $p = .019$); and as expected with *Total Internet Usage* ($F(5,205) = 10.213$, $p = .000$); and *Total Skills* ($F(5,205) = 5.114$, $p = .000$). Significant differences between *Hours Online per Week* were also attained for *Attitude* ($F(2,200) = 9.110$, $p = .000$); *Perceived Ease of Use* ($F(2,193) = 5.849$, $p = .003$); *Perceived Usefulness* ($F(2,198) = 9.593$, $p = .000$); and as expected with *Total Internet Usage* ($F(2,204) = 15.267$, $p = .000$); and *Total Skills* ($F(5,204) = 6.279$, $p = .002$).

[7] Item 8 in questionnaire
[8] Item 9 in questionnaire

Significant differences between *different course levels* were attained for *Attitude* ($F(4,203) = 5.579$, $p = .000$); *Perceived Ease of Use* ($F(4,196) = 3,537$, $p = .008$); *Perceived Usefulness* ($F(4,201) = 3.624$, $p = .007$).

Results indicate that technology related factors highly influence both *Perceived Ease of Use* and *Perceived Usefulness*. It seems that diverse Internet usage; long time spent online; high connectivity (broadband over dial-up); and higher technical skills; resolve into a higher *Perceived Ease of Use* and to a lesser extent, *Perceived Usefulness*. A student with high technical readiness reports a high *Perceived Ease of Use*, a high *Perceived Usefulness* that thereafter resolves in high Attitude. As with any other technological innovation, it is expected that people with exposure to similar technologies tend to perceive a lower learning curve and therefore envisage a lower barrier to the actual usage.

Gender, age and perceptions

In resonance with previous research by Lee (2003), no significant difference has been reported between male and female students indicating that the gap between sexes relating to the adoption of technology in a campus environment has closed down. Although some insignificant mean differences were noted for male and female as regards total skills (males) and total usage (females), means for Attitude, *Perceived Usefulness* and *Perceived Ease of Use* were almost identical.

Although no relation was encountered between age and any factor, some differences were reported between age groups[9]. Results indicate that students in final years (20 to 23 years) of study tend to have higher *Perceived Ease of Use* ($F(2,198) = 3.366$, $p = .037$) than students pertaining to the first years (18 to 20 years). Such findings might indicate that *Perceived Ease of Use* rather than increasing with age, is more related with the stage of education the student has reached. It can be argued that *Perceived Ease of Use* is bound to increase in stages as new skills and learner control are gained in parallel to the academic course experiences.

Intention

Although research results indicate that in both intention scenarios Attitude was a strong predictor, significant differences were noticed. Results indicate that students with a science area of specialisation are less keen to have their current course (intention 1) delivered online when compared to students from a language area ($t=2.719$, $p < .01$)[10]. A reason for this could be the conception that specialisation areas with strong practical aspects seem to be harder to master in an online environment. Nevertheless these same students had no significantly different scores as regards to attitude and perceptions, and showed the same willingness to do an online course in future to better their career (intention 2).

[9] Subjects were grouped in three age groups being 18 to 20, 21 to 23 and 24 and over.

[10] Two main categories were identified consisting of Languages (English, French, German, Italian, Maltese; N=47) and Sciences (Biology, Chemistry, Computing, Mathematics, Physics; N=32). All students were extracted from B.Ed.(Hons) in the Secondary track.

Previous experience

Students in this sample have very limited experience of online learning. Only 9.9% claimed to have previous experience of online learning out of which only eight experienced a formalised online component as part of their course. Due to the lack of respondents with previous experience, no conclusions can be drawn as regards to its implications on perceptions, attitudes and intentions.

Conclusions

Students are connected to the Internet, have the necessary basic skills and make frequent use of the Internet in relation to their academic needs. They use the Internet for research and for communication both synchronously and asynchronously. Results indicate that students share positive perceptions and attitudes towards online learning modes which thereafter reflect into positive intentions.
However, results are limited in their generalisability. The sample was extracted form a student population who is reading for a degree or diploma in education and does not reflect the wider University population. The fact that students are in a teacher training programme could also have influenced their perceptions towards learning innovations. Nonetheless this study resonates with previous research and has found that students' level of connectivity and technical skills; and student's area of specialisation and course stage contribute to the formation of perceptions and attitudes towards online learning.

Although the population investigated seems to be technically ready and reports positive perceptions, attitudes and intentions towards the adoption of online learning modes; this does not necessarily imply that students are ready to immerse in online learning modes. This research shows that few students have actual experience of online learning and few students have experience of the more complex communication modes as online conferencing. Such indications show that due to the limited previous experience, students might not know what online learning might imply and perceptions might have been based on distorted or incomplete information. Furthermore, this research distanced from any particular learning method and purposely ignored pedagogic issues. Online learning is only a part of a paradigm shift which is changing all aspects of education. Online learning is therefore accompanied by other diverse issues which need readiness assessment in their respect. It would be unwise to assume that though students have technical capacity and positive attitudes and intentions, they are ready to immerse into an learning environment which is different to what they are accustomed to. In this respect, readiness for new flexible modes of learning need to be addressed in future research.

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Appendix

Outline of questionnaire used

1. Profile: Age, Sex, Course, Course Year, Area(s) of Specialisation, Computer Courses
2. Internet Home Connection: Dial-up, Broadband, None
3. Access to internet: Home, Campus, Other
4. Hours spent online
5. Internet usage
    a. conduct research in connection with your course
    b. communicate with friends
    c. contact University staff
    d. read online newspaper / magazines
    e. download / play music, videos or games
    f. retrieve information/content from Faculty/University site
    g. shop online
    h. use e-banking facilities
    i. access the e-government portal (www.gov.mt)
    j. search for a telephone number or email address
6. Skills
    a. download and install browser plug-ins
    b. discuss in a chat (IRC etc.)
    c. post a message in an online forum (groups, bulletin boards etc.)
    d. download software over the internet
    e. find a website using a search engine (Google, Yahoo etc.)
    f. create a basic web site (Microsoft FrontPage, etc.)
    g. send an email with an attachment
    h. transfer files via FTP
    i. zip (compress) a file to take less space
    j. scan your machine for viruses
7. Perceptions (If 50% of a compulsory unit was to be delivered online via Internet using a variety of technologies like email, forums, chat and others whilst all print resources would be made available online… 1=Strongly Agree, 5 = Strongly Disagree)
    a. The quality of the course would **not** improve
    b. I would be able to schedule my work better
    c. I would **not** learn more
    d. This will **not** improve my grades
    e. I would waste less time travelling and finding a parking
    f. Tutor would be more accessible
    g. Communicating via internet would be difficult
    h. It would be easy to find the information I need
    i. Using forums (bulleting boards) and email would be complex
    j. Downloading course materials would be a simple task
    k. Learning to use the new technology would **not** be easy
    l. Instructions given by the tutor would be easy to follow
    m. This learning environment is not for me
    n. Learning would be fun
    o. I would **not** enjoy myself studying in this environment
    p. Internet provides an attractive learning environment
8. Intention 1 (If this unit was to be offered next year and you could choose between the traditional lecture mode and the proposed combination.)
9. Intention 2 (After you graduate, would you consider doing a course delivered online via the Internet as part of your professional development?)
10. Previous Experience. Duration of online component.