A Pilot Study of Professional Networking Sites Adoption by University Students

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Abstract

With the evolution of digital technology and professional networking, the at-hand services and effectiveness of various professional networking sites have increased tremendously. Thus, to analyze theadoption and usage frequency of these professional networking sites, a pilot study was conducted among 20 university students from the actual study population to reach their perception about the use of professional networking sites. In the study, variables of the TAM model are tested, i.e. Perceived Ease of Use, Perceived Usefulness, Attitude, Behavioral Intention, Self-Efficacy, Subjective Norm and System Accessibility. Such that, a questionnaire survey was prepared based on the study variables, which was distributed online. The results were acquired using SPSS statistical tool. Ultimately, the pilot study makes a valuable contribution in validating the research questionnaire in case of any ambiguity observed therein before conducting the formal survey. Moreover, Pre-testing method was adopted with the initially designed questionnaire to eliminate any unnoticed errors and to achieve more accuracy while drawing conclusions.

Keywords: *Professional Networking Sites, TAM Model, Students, Adoption, SPSS, Pilot Study.*

I. INTRODUCTION

In today's digital economy, various networking sites have achieved a significant value among people of all generations. The networking sites have expanded to both professional and conventional activities that has dramatically changed the way people think [1]. Professional Networking Sites (PNS) such as LinkedIn, Quora, Xing, FutureLab, Jobcase, and fewother community forums have gained traction in recent years. The largest and the most preferred professional networking site 'LinkedIn' possesses over 610 million users in more than 200 countries worldwide [2]. Similarly, 'Xing' as a preferred professional community forum in European region, acquires about 15.8 million worldwide subscribers [3]. Whereas, 'Quora' is considered among the best online discussion forum specially for professional community serves up to 300 million active users per month [4]. The total number of global social networking users are estimated to rise by 2.9 billion by 2020 [5].

II. RESEARCH BACKGROUND

Academic researches on professional networking [6]–[8] have focused their discussion on two specific perspectives. First, several studies have mentioned on the negativity of engagement with professional networking sites which are said to be a cause of distraction and a waste of time [9]–[11]. Some studies have also revealed that the one-dimensional frequent online activities may cause some long lasting problems for students, as they tend to become more introvert that leads to deficiency in self-confidence and face-to-face coordination as well as personal health-care issues [8], [12]. Moreover, studies have also revealed that the excessive use of online platforms have caused students to indulge in to threats like scams, fraudulent, cyber bullying, privacy breaches and few other risks [13]. Second, there is a school of thought that professional networking sites uptake is

infused by various reasons or factors such as; it opens up more career opportunities, useful source for sharing knowledge and experiences, a business tool for building long-term relationships and making professional connections with industry peers [14], [15]. The investigation process of this study highlights the pilot study method, which was conducted to validate the instrument questionnaire in case of any ambiguity observed therein before conducting the formal survey.

A. Digital Social Innovation

Digital social innovation a relatively new conceptis often affiliated with positive meanings, such as; openness, collaboration or inclusion in contrast with technology oriented conventional innovations[16]. Theoretically, digital social innovation can be interpreted as the process of developing and implementing effective solutions that rely on digital technologies to address social and environmental issues that involves open data infrastructures, knowledge co-creation platforms, decentralized social networking and few more potential cases of DSI that facilitate peer-to-peer interactions and mobility between people. Through the years, the innovators and social entrepreneurs have been working to develop stimulating digital solutions for a variety of social issues in areas such as health, democracy, consumption, money, transparency, and education which is termed as Digital Social Innovation[17].

B. CSFs of Website Acceptability

The review of literature will work as an insight source for practitioners specially for website providers. To raise their competence level, measuring Critical Success Factors (CSFs) would help networking site providers to develop effective strategies for their internal operations of content development and various tasks related to web deliverance. The providers must ensure that their website fulfills users' high demands that encouragethe sharing of knowledge and provide users with what might be termed as "self-learning" technology that builds the relationship between its subscribers [18].

Volery and Lord (2000) have come up with a survey result conducted amongst 47 students at an Australian university, the students were enrolled for a course of e-learning based management system. They came up with three CSFs for website acceptability in an online education system. Firstly, "Technology" that mainly focuses onweb interface design, interaction level, ease of access for users and some other aspects. Secondly,attitude of Instructorstowards students and their competency

with technology as well as interaction level in classroom. And lastly,how students perceive the technology [19].

Another survey by Helmi (2002) on website perception among postgraduate students states that the CSFs for online learning websites are information technology, demands of the market and credibility of higher institutions. Additionally, some CSFs are totally based on technology, such as bandwidth,hardware reliability, network security and accessibility [20].

C. Study Constructs

1. *Perceived Ease of Use:* An individual's perception that using a networking website would be free of effort[21].
2. *Perceived Usefulness:* An individual's perception that using a networking website would enhance his or her performance [21].
3. *Attitude:*It determines the user behavior which in turn influences the actual acceptance of the website[22].
4. *Behavioral Intention:*It determines the Individual's intention towards using a networking website[23].
5. *Self-Efficacy:*It determines the individual's skills and ability to perform related tasks on a networking website[24].
6. *Subjective Norm:*It determines the perceived social influence to use or not to use the networking website[25].
7. *Website Accessibility:*The degree of ease with which university students can access professional networking sites on campus[26].
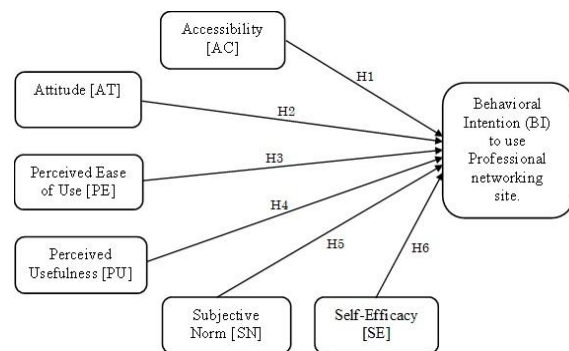
D. Theoretical Model

Fig. 1: Study Model

III.   PILOT STUDY

Inline with the survey method, a pilot study was conducted among 20 university student respondentsfrom the actual target population to reach their perception about the use of professional networking sites.Moreover, Pre-testing method was used with the initially designed questionnaire to eliminate any unnoticed errors and to achieve more accuracy during the analysis.The findings of the pilot study was used to predict the audience perception and to strengthen the actual study by validating the research constructs after administering the survey responses. The items of the questionnaire were adopted from the past literature of related studies that employed Technology Adoption Model. The items were then modified further making it specific to the research topic and objectives. Meanwhile, in the pilot study different variables of the TAM model were tested through the designed items, which are; Perceived Ease of Use, Perceived Usefulness, Attitude, Behavioral Intention, Self-Efficacy, Subjective Norm and System Accessibility.

A.   Data Collection andSampling

In this study, convenience sampling technique was best suited since it is mostly preferred for quantitative studies where the target audience is fixed. Therefore for sample size, the aim for the pilot study was to get the response of around 20-30 university students in Malaysia who are easily approachable and have time to participate in the initial survey. The analogous questionnaire was designed carefully with the help of previous studies using google forms and later distributed online. Initially, the pilot survey process took around 10 days to get the desired number of responses which can be used to represent the perception of the actual sample audience of the study.

B.   Instrument Design

The survey instrument was comprised on 3 sections. First section had a brief elaboration of informed consent describing about the research topic, the value of participation, addressing concerns about respondent identity protection and author's profile information. Second section contained the demographic information, in which respondent is required to be a user of any professional networking site in order to continue the survey. Additionally, the section has questions about years of using professional networking sites, preferred professional networking site, weekly usage frequency, name of institution, highest qualification, age and gender. Third section was divided into seven sub sections according to the adopted model specifying the research variables

that contained different number of items/questions for its each variable construct. Likert-scale measurement was used with each item for obtaining accurate results.

C.   Pre-Testing

Initially, the designed instrument was forwarded online to 5 senior university lecturers for their expert reviews and cross evaluation to point out anyvagueness therein and to establish the face validity of the instrument. In this way, their valuable feedback helped in removing the ambiguities therein and further modification of the employed questions before conducting the formal survey. The below table presents the instrument model constructs with their items and references.

Table 1: Coding Constructs and Items with References

Constructs	Code	Questions/Items	References
Perceived Ease of Use [PE]	PE1	I find Professional Networking Sites easy to use.	[27]–[29]
	PE2	Learning and finding desired information on a Professional Networking Site is easy for me.	
	PE3	The service features of Professional Networking Sites are generally easy and understandable.	
	PE4	English language is not a barrier for me when I use Professional Networking Site.	
Perceived Usefulness [PU]	PU1	Professional Networking Sites improve performance and productivity of young people like me.	[27]–[29]

	PU2	Professional Networking Sites are very useful to get industrial insights and career counseling.	
	PU3	Professional Networking Site helps in faster learning and growing my career.	
	PU4	Frequent use of Professional Networking Site creates more career opportunities for students like me.	
	PU5	Consistent Professional Networking enhances professional reputation and strengthen relationships with industry peers.	
Attitude [AT]	AT1	Using Professional Networking Site for career counseling and mentorship sessions for university students is a good idea.	[30], [31]
	AT2	I prefer using Professional Networking Site as a smart way of sharing knowledge and experiences.	
	AT3	I enjoy engaging with industry experts through Professional Networking Site.	
	AT4	I believe in using Professional Networking Site as it creates a positive professional image.	
	AT5	I am satisfied with what Professional Networking Sites offer to young students like me.	
	AT6	I would recommend using Professional Networking Site to my friends.	
Behavioral Intention [BI]	BI1	I intend to follow up on career postings and check on industry experts through Professional Networking Sites frequently.	[22], [32]
	BI2	I intend to be an active user of Professional Networking Sites.	
	BI3	I intend to continue using Professional Networking Sites in the future.	
	BI4	Whenever I login to my Professional Networking account, I intend to use it for at least an hour.	
Self-Efficacy [SE]	SE1	I have necessary skills for anticipating Professional Networking Sites.	[31], [32]
	SE2	I can easily browse through Professional Networking Site without any assistance.	
	SE3	I feel confident in finding desired information and collaborating with mentors.	
	SE4	I often feel that I lack certain skills when using Professional Networking Site.	
Subjective Norm [SN]	SN1	The offerings of Professional Networking Sites are important for young graduates like me.	[31], [32]
	SN2	In order to enhance career opportunities and knowledge sharing, it is necessary for a student like me to do Professional Networking.	
	SN3	My University's innovative and collaborative environment encourages students towards Professional Networking.	

Accessibility [AC]	AC1	I have no difficulty accessing and using Professional Networking Sites in my university campus.		[31], [33]
	AC2	Browsing through Professional Networking Sites is generally fast, even on average internet connection.		
	AC3	Smartphones and Laptops have made it easy to access Professional Networking Sites.		
	AC4	I usually use smartphone for accessing Professional Networking Site anytime.		

D.   Data Analysis

The responses of the study were collected from 20 graduate and under-graduate students who were studying in APU University. Initially, all constructs in the instrument were measured on five-point Likert-scale, i.e. 1 = Strongly disagree; 2 = Disagree; 3 = Uncertain 4 = Agree; 5 = Strongly agree. However, after close evaluation and analysis of the completed survey few more questions were added to the constructs, few were further modified and some were discarded due to more uncertain responses of the participants. Therefore, to eliminate this ambiguity in the actual large study, the five-point Likert-scale was extended to six-points that can be measured as; 1 = Strongly disagree; 2 = Disagree; 3 = Somewhat disagree; 4 = Somewhat agree; 5 = Agree; 6 = Strongly agree. On the other hand, the following table summarizes the demographic information obtained from the pilot survey.

Table 2: Respondents' Characteristics

Characteristics	Breakdown	Frequency	Percentage
No of Respondents	-	22	100
Are you a user of any Professional Networking Site?	Yes	20	90
		2 (Discarded)	
	No		10
Position in university	Student	20	100
Name of your Institution	Asia Pacific University	20	100
Indicate your most preferred Professional Networking Site.	LinkedIn	12	60
	FutureLab	5	25
	Quora	2	10
	Xing	1	5
	Jobcase	0	0
Since when areyou using such a Professional Networking Site(s)?	Less than 1 year	15	75
	1 - 3 years	2	10
	More than 3 years	3	15
Gender	Male	14	70
	Female	6	30
Age Group	18 – 25	7	35
	26 – 32	8	40
	33 – 40	5	25
Highest Qualification	Bachelor Degree	8	40
	Master Degree	10	50
	PHD	2	10
How often do you use your Professional Networking account?	Once in a week	6	30
	At least twice in a week	4	20
	Most of the time in a week	3	15
	Everyday	7	35

Table 3: Instrument Validity

Construct	Items Used	Composite Reliability [CR]	Cronbach's Alpha [α]
Perceive Ease of Use [PE]	4	0.7719	0.611
Perceive Usefulness [PU]	5	0.9070	0.856
Attitude [AT]	6	0.8447	0.774
Behavioral Intention [BI]	4	0.8141	0.705
Self-Efficacy [SE]	4	0.6599	0.827
Subjective Norm [SN]	3	0.8800	0.735
Accessibility [AC]	4	0.9068	0.852

IV. DISCUSSION AND CONCLUSION

The study was one of a few quantitative studies to focus on finding the critical success factors to successfully launch a professional networking site for the millennials.The pilot survey was used to predict the audience perception and to strengthen the actual study by validating the research constructs after administering the survey responses.

To evaluate the data obtained from the pilot study, SPSS software was used foranalysisof the respondents' demographics. The table for demographic results was obtained by finding the frequencies of descriptive statistics in SPSS. Furthermore, to test the validity of the designed instrument, reliability analysis was carried out on each construct to get the Cronbach's Alpha value for each variable. Moreover, after obtaining the required values, the results were also compared and cross checked with SmartPLS 3 software to strengthen the instrument validity by removing any unwanted hiccups available in the questionnaire. However, for the evaluation of the critical success factors, study constructs were assessed and results were drawn based on the initial findings.

The findings of the pilot study revealed that the students who participated in the survey had the basic knowledge of professional networking sites. Whereby, all of the participating students are from Asia Pacific University-Malaysia. Moreover, LinkedIn was the most preferred professional networking site among the responding students. However, majority of them were new users. Also, 70 percent of them were male students while 30 percent were females. Since, the sample population were university students who were well educated, so would be able to comprehend the issues being explored through the survey. Hence, the knowledge that they share would constitute a valid perspective.The last section in the table presents the usage frequency of professional networking sites by the respondents during week time. As can be seen, majority of the students use these professional networking sites every day. Such statistic is a clear illustration of millennials attitude towards digital technology and professional networking.

Furthermore, table 3 presents the validity of study constructs, where the values of composite reliability (CR) and Cronbach's Alpha for each variable is tested using SPSS. such that, the findings of the instrument validity clearly reveals that all of the variable items in the study questionnaire were designed appropriately that have good accuracy for exploratory analysis and further formal survey can be satisfactorily administered.

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