

A Study on Perception of Students towards Pursuing an IT Certification

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Abstract— This conceptual paper explores the perception of students towards pursuing Information Technology (IT) Certification. Having reviewed extant literature we stand to identify that there have not been any studies that measure the multidimensional aspects of students perception towards IT certification. The purpose of this paper is to investigate the perception of students based on the benefits and risks of pursuing IT certification and how relevant it to their career. Both benefits and risks are analyzed using a theoretical framework. It is evidenced by the literature that, a lot of undergraduate students have these days started looking at these IT certification course for their career growth. Students consider it as an important factor in achieving skills and job. Apart from the perceived benefits, there is a few risk perception associated with it. The perceived risk consideration is the rapidly changing knowledge structure and technology platforms. The study looks at benefits and perceived risks as constructs that measure the intention to pursue IT certification. The model has been measured using a structured questionnaire and SPSS has been used to analyze and draw results. The preliminary analysis throws light on the relevance of the benefits that students perceive while pursuing IT certification. The associated perceived risk was relatively a moderate consideration for the students while pursuing IT certification.

Keywords: *IT Certification, Perceived Benefits, Perceived risks, Marketability, Salary Benefits, Career prospect, Skill Development, Employment, Technology, Knowledge structure.*

I. INTRODUCTION

In the field of Information Technology (IT), students and employees can earn an industry credential referred to as an IT certification. Information Technology (IT) is rapidly growing nowadays and getting certified has become important. IT certification is very popular for job-seekers especially students from undergraduate colleges. Nowadays it has become a necessity to obtain IT certification. Most university IT degrees does not give practical experience. But IT certification is more task-oriented (Hitchcock, L., 2007). Most of the popular

certifications were focused on office productivity software and operating systems (Nelson & Rice, 2001). It is increasingly important for IT professionals to be aware of specific skills and their demand in growing job market. Professionals should also pay attention to the skills for which demand may be continuously growing so as to better position themselves in the today's competitive job market (Prabhakar, 2005). There are two groups of IT Certifications: vendor neutral and vendor specific. Those certifications, which are related to IT professions such as security, business intelligence, project management, offered by independent organizations like CompTIA, PMI etc are vendor neutral. Vendor-specific certifications are those certifications, which related to products and services of technological companies such as Cisco, Novell, and Microsoft etc (Rob, 2013). Many IT companies such as Oracle, Microsoft, and SAP has partnered with educational institutions to gain loyalty to their products and technology by the instructors and future IT professionals (Rob, 2013). There are some employers give value for academic degrees more than certifications while some others value certifications over degrees, and still, others value both (Eric S., 2013). Job vacancies are analyzed in terms of education, work experience and IT certification requirements (Robin, 2011). It gives students a competitive edge in the job market. It sets individuals apart with the visual identity of certification and indicates that a candidate or employee is committed to the profession and the industry. Students can gain confidence, can stand out and earn more (Rob, 2014). Employees working in the IT industry would have acquired better information from their colleagues, than others without IT work experience who would have been receiving information from a pool of people with perhaps limited direct IT industry experience (McGill & Dixon, 2003). The gender proportions are consistent with the low representation of females in IT courses around the world (Downes & Hobbs, 2000; Fitzsimmons, 2000).

Different dimensions of the perceived benefits mentioned in the literature review are Marketability, Career Prospect, Salary Benefit, Skill Development, Credibility, course curriculum

and different dimensions of the perceived risk mentioned is the change in technology, job guarantee, heavy involvement of vendors etc. Nowadays students are skeptical about pursuing IT Certification. Thus, multidimensional aspects of student's perception towards IT certification are measured in this paper.

II. LITERATURE REVIEW

Perceived Benefits of IT Certification

Marketability

Students believe that they are more marketable by obtaining IT certifications. Marketability is one of the benefit students are looking nowadays. It is one of the major benefit (McGill, 2005). Students are marketable if their programs of study contain course content, which is considered useful by employers. So marketability is one of the reasons for students towards pursuing IT certification (Ray & McCoy, 2000). It is necessary to make informed course curriculum decisions about IT certification programs by an understanding of the current IT workforce and future career growth to ensure the marketability of students and their long term and continuous success in the IT workforce (Randall, 2005). The advantages for such certifications are that students are provided with widely recognized, marketable skills (Brookshire, 2000). Students acquire marketable skills and thus they gain an competitive edge in the job market after they get certified (Saleem, 2015).

Career prospect

Students believe that IT certification is important for their career advancement (McGill, 2005). Almost all current or past students believe that IT certification can help them build a better career. They can attain high growth in their career (Rob, 2013). A student who has obtained an IT certification along with his post-secondary education has a strong theoretical foundation. Also they have an increased marketability, and better chances for long-term career growth. Implementation of vendor-neutral or vendor-specific programs will provide students with the best chances of success not only in their education but also for their career (Randall, 2005). A survey conducted for 470 IT contractors found that 83% of the participants feel that certifications were important for their career advancement (Alexander, 1999). Certification helps employees earn promotions (Gabelhouse, 2001). Many IT professionals believe that managers use it as a selection criteria during recruitment (Scott, 2009). They are important to the students who use these skills to get better jobs. Even institutions that provide the training feel that it is important as it attracts and places their students (Brookshire, 2000). Employers prefer students having both a certification and a university qualification. Information Technology professionals are seeking to understand the best way to acquire the needed

skills to remain competitive in their market. Some are seeking to receive Information Technology certifications for job security and continued opportunity (Gina Potenza, 2005). A survey was conducted for HR managers and was found that IT certification, education, and work experience are imperfect substitutes for each other (Anderson, Barrett and Schwager, 2005). Academic IT departments value IT certification, and they either require IT certification or expect employees to be working towards certification. But an overwhelming endorsement of IT certification was not evident (Wierschen and Zhang, 2010).

Salary Benefit

Impact of information technology certifications is not only on job performance but also on salary and career growth. Certified professionals could boast of huge salary gains that were higher than their non-certified colleagues (Gina, 2005). In addition, students perceived that being IT certified would lead to salary hikes. Those students who do not have prior IT experience appeared to overestimate the potential financial benefits. Research also shows that higher salaries are not seen as an important benefit of IT certification (McGill, 2004). The Human Capital Theory states that formal education, work experience, and training contribute to an employee's wages independently and collectively according to firm size, location and personal characteristics, such as age and gender (Quanet, 2007). Certified employees often get higher salaries and bonuses than those employees who are not certified (Gabelhouse, 2002). Employers often use IT certification along with educational qualifications and sometimes in place of it (Hunsinger, 2008).

Skill Development

Certifications act as a tool to hiring managers. By certification, they can measure an employee's knowledge and skill necessary to perform in a particular IT job role (Randall & Zirkle, 2005). Through certifications, the person will acquire additional knowledge and skills which will help him to move into a new area and perform his current job more effectively. Also the person will get exposure to the latest technologies (Zeng, 2004). SQL programming, Web programming, UNIX, C++, Java and Oracle database seem to be the top skills in the current job market (Prabhakar, 2005). There is an external and objective mechanism for assessing the skills and knowledge of a student in one or more information technologies (Saleem, 2015). Certification is one of the criteria used by employers for selecting employees who are capable. Their current employees who update their knowledge and skills through certification are more valuable employees as they bring quality to the job (Martinez, 1999).

Credibility

Acquiring an IT certification can bring on a confidence boost as well as perceptions of credibility among colleagues and clients (Potenza, 2005). IT certification helps to establish credibility, but a degree helps to expand a person's knowledge. Both are needed to be qualified for a given job

opportunity. However, there is a tension in academia between certifications and degrees (Eric S., 2013).

Perceived Risks of IT Certification

The students pursuing IT Certification were aware of the potential risks of certification but they were not nervous about it. Most important risk was the rapidly changing knowledge structure, as certification will not last value (Benamati & Lederer, 2001; Fordham, 2001). As demand for IT services is continuously increasing, organizations are finding it difficult to obtain employees who have appropriate skills (Doke, 1999). There are certifications which doesn't require any practical or real-world experience (Wilde, 2000). There are some employers as well as educators who doesn't give value in certifications, since certifications are not accredited. They do not have single standard and so they are not noticed among employers. Vendor, schools and different organizations can provide certification. If a certification is recognized by one employer, they may not be recognized by some other employer. As technology changes, certification may lose its value. Therefore, it needs to be updated every 2 or 3 years (Zeng, 2004).

III. RESEARCH FRAMEWORK

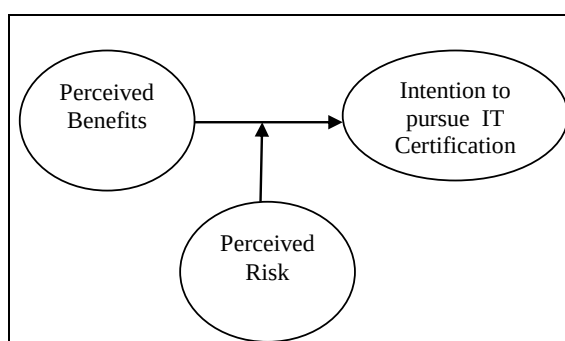


Fig. 1 Conceptual model

Independent variable is perceived benefits and the intervening variable is perceived risks of IT certification.

Thus the constructs of perceived benefits is measured through 9 items, and risk is measured through 2 items. The study will help to identify the factors influencing students towards pursuing an IT certification. Here we can find out whether perceived benefits contribute towards building up a positive intention. The model has been conceptualized as depicted in Fig. 1.

IV. RESEARCH METHODOLOGY

Survey Instrument and Collection of Data: The instrument used for the study is a structured questionnaire. The

questionnaire consisted of 2 parts. The first part consisted of demographic information such as age, gender, level of education. The second part of the questionnaire collected information related to the constructs used in the study, that is questions related to perceived benefits and risk. All items in the questionnaire were measured using a 5-point Likert Scale which varies from 1 (strongly agree) to 5 (strongly disagree). The target populations were high school, undergraduate students, and postgraduate students. The questionnaire was pilot tested using a sample of 40 students between age groups 13 and 25. The reliability of the questionnaire was checked using SPSS. A Cronbach alpha value greater than 7 is acceptable. The overall Cronbach alpha for came to 8.59, which is considered as a acceptable value for further analysis. Subsequently, the questionnaire was floated using Google forms to 164 respondents throughout Mumbai. The responses were collated in an excel sheet for further analysis.

V. ANALYSIS OF RESULTS

The analysis of the demographic part of the study is depicted in TABLE I.

TABLE I. DEMOGRAPHIC RESULTS

Demographic Variables	Categories	Frequency	(%)
Age	13-15	3	1.8
	16-18	32	19.5
	19-22	83	50.6
	23-25	46	28.0
Gender	Male	81	49.4
	Female	83	50.6
Education	High School	40	24.4
	Bachelors Degree	112	68.3
	Masters Degree	12	7.3

Socio-demographic Assessment: The study was conducted among students from Mumbai in the age group of 13-25 years by distributing questionnaire and floating Google forms among the target audience. The respondents had almost an equal number of male and female population which stood at 81 and 83 percent respectively. Most of the surveyed students were from age group 19-22 years. Therefore, about 68% were undergraduate students who are pursuing their Bachelor's degree.

The analysis of the second part of the questionnaire is depicted in both the figures.

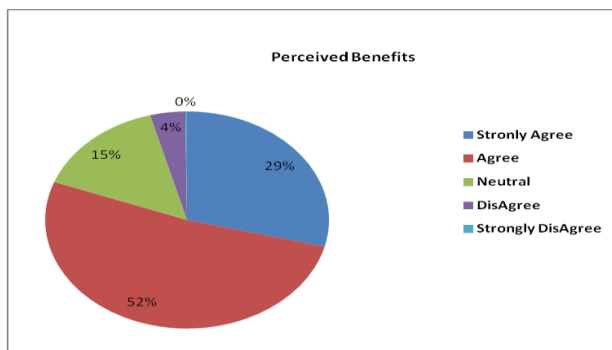


Fig. 1 Perceived Benefits

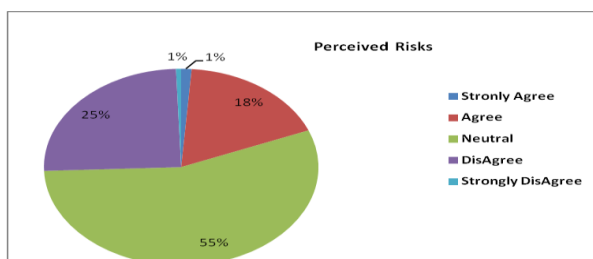


Fig. 2 Perceived Risks

From Fig. 1 we can analyze that 29 % of students strongly agree and 52% of students agree that perceived benefits are one of the factors influencing students towards pursuing an IT certification. From Fig. 2, 55% of the students are neutral to perceived risks.

TABLE II. DESCRIPTIVE STATISTICS

	N	Minimum	Maximum	Mean
Perceived Benefits	164	1.00	3.60	1.8732
Perceived Risks	164	1.00	4.50	2.9299
Valid N (listwise)	164			

TABLE III. DESCRIPTIVE STATISTICS OF PERCEIVED BENEFITS

	N	Minimum	Maximum	Mean
Career Prospect	164	1.00	4.00	1.9299
Credibility	164	1.00	4.00	1.9207

Salary Benefit	164	1.00	4.00	2.0976
Skill Development	164	1.00	3.30	1.7506
Marketability	164	1.00	5.00	2.0671
Valid N (listwise)	164			

TABLE IV. DESCRIPTIVE STATISTICS OF PERCEIVED RISKS

	N	Minimum	Maximum	Mean
Changing Technology	164	1.00	5.00	3.0610
No Job Guarantee	164	1.00	5.00	2.7988
Valid N (listwise)	164			

From TABLE II, we can infer that students are on a strong agreement about the perceived benefits (mean is approx 2) while pursuing IT Certification. The respondents were conscious of the potential risks but they were not concerned about it (mean is approx 3). From TABLE III, we can infer that skill development, credibility and career prospect are the factors, which students perceive as most important benefits followed by marketability and salary benefits. Changing technology and no guaranteed job are the perceived risks. From TABLE IV, we can infer that students are neutral towards both the risks (mean is approx 3).

VI. CONCLUSION

In the light of above findings, we can infer that benefits and risks play an important role in the decision-making process of students. This study explored the perception of students towards pursuing IT Certification. Certification was perceived as an important factor in achieving skills, credibility, career and students anticipate that it will lead to substantial financial benefits. The students were familiar of the risks but they were not anxious about it. The issue was rapidly changing knowledge structure and technology platforms.

VII. LIMITATION OF THE STUDY

The study is limited in its present scope because it has been confined to Mumbai only. Further studies can incorporate more constructs to analyze the perception of students towards pursuing an IT Certification.

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