

Users Acceptance of Management Information System in University Environment: Applying UTAUT in Preparatory Year Program of Jazan University

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Abstract

This study has been conducted to identify various advantages associated with the Infosys in the Preparatory Year Program (PYP, henceforth), as also to identify factors which influence behavioural intentions and user intentions towards the same. We have opted for a quantitative research method applied on data collected through the primary sources, i.e., questionnaire and survey from the concerned populace, such as faculty and admin officers. The model used comprised of four factors, including performance expectancy, effort expectancy, influencing conditions and social influence on behaviour intentions towards the Infosys. Four moderating variables have also been used to be applied on every factor individually and to find the correlation and statistical significance for the extraction of a more accurate and coherent results and findings. Data have been collected from a sample size of more than a hundred participants comprising of faculty, students and admin officers spread across more than 40 courses. The data was then analysed using the analytical tools in SPSS applying linear regression as well as multiple regression on the variables including main variables and the moderating ones as well. Linear regression has been applied to extract the results about the statistical significance and the correlation among various variables which was taken as the moderating variables comprising of age, experience, and voluntariness of use and the gender of the participant. Four main hypotheses were developed to find the influence of the main variables – performance expectancy, effort expectancy, influencing conditions and social influence on the behaviour intentions, while each hypothesis dealt with the individual variable to find the influence associated to it. Afterwards, multiple regressions were applied to find which of the factors has more influence and correlation with behaviour intentions and user intentions towards PYP Infosys.

Through the data analysis in SPSS, it has been found that performance expectancy has been more correlated and resulted in a positive linkage with the use of PYP Infosys at Jazan University. However, the variables have been found less correlated and statistically less significant in case of others. Effort expectancy were analysed through the implementation of analytical tools to find correlation among the moderating variables of age and experience. But effort expectancy has been found not correlated to behavioural intentions. Linear regression demonstrates that the effort expectancy has positive linkage with user intentions. Third variable was the influencing conditions and it has been found that the influencing conditions also have a positive linkage and influence over user intentions towards PYP Infosys. All the variables which were selected for the research have been found having positive linkage with behaviour intentions. The moderating factors although have been found having weak linkage with the main factors. According to the evidence found in the existing literature and researches, and also the results of this study, the advantages of information system in educational institutes and educational divisions are imminent and that the educational establishments are increasingly willing to implement information systems irrespective of whether they know about it or not.

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I. Introduction

Information Systems (IS) has become the backbone of contemporary educational institutes. It enables schools to store important info on students and assists administration in managing the schools as well as the districts as a whole (Lee, 2003). If the use of information systems gives advantage to an educational division, subsequently it will give advantage to the overall educational system. When the information system tool gives advantage to learning, subsequently it also benefits teaching.

If it benefits teaching, it, then, surely benefits management and the learning students as well. It is a mutual effort that has an effect on every aspect of education (Davis, 2000). Many researchers have published studies which show strong evidence that technology helps in enhancing academic success. Different associations are studying and following the tie which demonstrates that technology is definitely enhancing academic achievement.

Using information system to manage education and learning activities is very common everywhere. However, in some universities and contexts, it is still very limited. In Preparatory Year Program (PYP) at Jazan University, where this study is conducted, there are more than 7000 students studying more than 45 courses, and taught by around 300 faculties. This urged the administration to have an information system (PYP Infosys) through which all administrative and educational activities could be managed and controlled. The administration of PYP has invested in this system and introduced it to their admin staff and faculties.

The aim of this paper is to examine the extent to which the PYP faculties have accepted and used PYP Infosys and felt more productive on account of it. Using Unified Theory of Acceptance and Use of Technology (UTAUT), this paper is trying to answer the following questions:

- i) What are the levels of faculty acceptance and use of PYP Infosys?
- ii) What are the factors that influence such acceptance and use of PYP Infosys?

Setting the Scene

PYP was established in 2010 to provide courses that prepare students for the university. The program offers more than 45 different courses based on the students' major for more than 6500 students. However, the focus of PYP is on preparing students in terms of English and basic sciences. More than 300 faculties teach these courses, all with different backgrounds in terms of ethnicity, education, culture, experience, and IT literacy. Managing such massive number of students and faculties required an information system that save, organize, manage and retrieve different types of data. The implemented system consists of the following sections:

Students' Affair System: in this system, the students' affair staffs enter all the students' request and applications. Through this system, students' excuses can be entered by the staff, get approved by the students' affairs coordinator and sent automatically to the teachers to change the student status from "absent" to "absent with excuses". If students have any complains or want to review their exams' papers, staff can record such requests and then it is sent automatically to the responsible unit.

Marks Management System: in this section, all students' marks can be entered by their teachers. The breakdown for all in-semester assessment is entered, reviewed by the course coordinator and saved. At the end of the semester, the overall marks can be calculated and the grade is specified automatically.

Exams Management System: this system represents the biggest part of PYP Infosys. Through this system, students can be distributed on exam rooms according to their group numbers and rooms' capacities, the conflicts can be avoided, the invigilators duties can be distributed equally and all the required forms can be printed.

Academic Service System: the main purpose of this system is to allow the course coordinators to provide confidential evaluation for their faculties and at the same time, the faculties can evaluate the coordinators.

Reporting Systems: provides different kinds of reports such as students' excuses, transaction and marks, etc.

Literature Review

Unified Theory of Adoption and Use of Technology (UTAUT) is a combined model and Venkatesh et al. (2003) developed it on the basis of social cognitive theory with a combination of 8 research models of important information technology (IT) acceptance (Chiu, 2008). The UTAUT was suggested and verified for providing a unified conceptual basis from which to make possible research on information system/ information technology acceptance and flow (Benbasat, 2007).

This model evaluates and combines the key theories in the user acceptance of IT. Venkatesh et al. (2003) introduced this theory for addressing the need for a unifying perception. For instance, the writer cites different theories from IS, psychology as well as sociology which could elucidate more than 40% of variance in individual intention for using technology, however no unifying theory existed. UTAUT was developed by experimenting and incorporating 8 diverse models regarding information and communication technologies use (Arbaugh, 2009).

The model below will summarize the key constructs to the unified theory of adoption and use of technology. This model is similar to the Theory of Planned Behaviour, with performance as well as effort expectancy together with social influences driving behavioural intention. Sequentially, behavioural intention together with facilitating conditions drives use behaviour. The constructs are moderated by four variables that include: gender, age, experience and voluntariness of use (Ahmad, 2010).

Developing the Unified Theory of Adoption and Use of Technology

In developing the UTAUT, Venkatesh et al. (2003) carried out the following: Firstly, they carried out a literature review of the user acceptance research and observed eight well-known models: theory of reasoned action, the technology acceptance mode, the motivational model, the theory of planned behaviour, a model combining the technology acceptance model and the theory of planned behaviour, the model of PC utilisation, the innovation diffusion theory, and the social cognitive theory. All these theories help in describing the types of information systems and their integration in the educational systems along with the explanation of their function and processes and impact on the overall management (Davenport, 2013).

These models have been effectively used by many earlier studies of technology or innovation implementation and diffusion in both the IS field as well as new disciplines that included marketing, social psychology and management. These models also explain the levels of integration of information systems analysing the dynamics of organizational changes and the results of IS integration and implementation with respect to improved systems and increased efficiency (Duffy, 2012).

The motivation for defining and validating the unified theory of adoption and use of technology was based upon the argument that several of the constructs of present models are same by nature; so, it was reasonable to plan and incorporate them for creating a unified conceptual basis (Porter, 2007). By doing so, originators of this model expected that future researches would require not to investigate, collect and incorporate constructs from many diverse models but as an alternative could only implement the UTAUT for gaining an understanding of a number of issues about IS/IT implementation as well as diffusion (Allen, 2012). Then, they compared these eight models as well as their extensions based on empirical evidence.

Secondly, they carried out a study observing the user intentions to utilize IT. More than six month period in 4 firms, constructs' questionnaire measurements in the eight users' acceptance models were produced with individuals in organizational backgrounds (entertainment, telecommunication services, bank, as well as public administration) which were initiating new Information and Communication Technologies systems (Nunnally, 2005). The questionnaire was modified to the technology and firms studied.

Thirdly, measurements were taken at three points throughout the process of adoption (post-training, 1 month after completion and adoption, and three months after adoption). After that, behavioural intention for using the system was measured with the 3-point scale, as modified from Davis (1989, referred to in Venkatesh, et al., 2003). Actual procedure was decided by determining system logs for the usage period. In accordance with Unified Theory of Adoption and Use of Technology, four constructs are important factors of user acceptance as well as user behaviour: performance expectancy, effort expectancy, social influence and facilitating conditions. These factors are selected on the basis of their impact found and gauged through the previous literature and research done in this field.

It has been found that performance and effort expectancy has impacted to enhance the final integration processes and efficiency (Galliers, 2014).

Performance Expectancy

Performance expectancy alludes to the estimation of adopter for the possible job benefits which the use of technology can bring (Rogers, 2006). Also this type of estimation is made up of the perceived usefulness of the technologies, extrinsic motivations to utilize the technologies, value of the technology to job-fit, comparative technological benefits over others, and outcomes expectancy. As the perceived benefits of the technological advancement increase, the expected performance from the system integration also increases which finally translates into the better results (Moore, 2011).

To be more precise regarding these 5 constructs which are incorporated in performance expectancy, the construct of perceived technological usefulness measures the degree to which an individual takes into account by means of a specific technology and will enhance his/ her job performance; extrinsic motivation is cautious about the outer drive, like better job performance, compensate or promotions, to utilize a specific technology; for job-fit, it emphasizes the functional aspects of technology in improving job performance of an individual; the construct of comparative advantage handles the advantage which the latest technology can bring in relation to what has already been attained by previous systems; the construct of outcome expectancy aims at the outcome of behaviour that can be divided into expectations of job-related performance as well as personal expectations which concerns individual objectives (Thompson, 2011).

Effort Expectancy

It is close to the idea of perceived technological usefulness as defined by Technology Acceptance Model (TAM). Perceived ease of use, complexity, and ease of use are its three constructs deriving from an earlier study (Taylor, 2010). The first construct focuses on analysing the degree to which the users consider it extra effort to utilize a specific technology; the second construct describes a situation where people consider of the newest system as a in a similar way more complex tool for understanding and using; the third construct is the extent to which utilizing an advancement is perceived as being complex to utilize.

Effort expectancy has a greater contribution towards the success or failure of a change implementation or a technology adoption because of the attitude of employees or other stakeholders can impact or alter the various levels of integration contributing to the final results (Kirschner, 2012). Effort expectancy construct has played an important role in both voluntary as well as mandatory usage contexts, however on no account as significant in the second round as the users who use the technology for the second time or more are aware of the exploitation process previously (Ajzen, 2007).

Social Influence Construct

This construct explains the situation where a person takes into account for adopting a specific technology owing to suggestion of other people. Subjective norm construct, social factor construct and image construct are its three constructs (Fishbein, 2009). The first construct talks about a situation where decision of an individual about whether to implement an innovation relies on other people whose ideas considered being vital to him/ her.

The second construct describes that a person makes decisions of technology implementation under the influence of the overall social situation. The third construct aims at testing the extent to which use of an innovation is supposed to improve image or status of one in one's social system (Davis, 2008). It is only evident therefore that adoption of an information technology system or replacement of the on-going processes or system requires much of the social or peer recommendation because it increases the positive perception towards the increased efficiency as a result (Garvey, 2014).

Facilitating Condition

It defines the role that organizational as well as technical infrastructures play in the "innovation implementation" decision of a person. It is composed of three different constructs, namely, perceived behavioural control, facilitating conditions, and compatibility. Facilitating conditions provide more thorough information regarding the surrounding environment, with both technical aspects as well as rule aspects that can improve or slow down innovation acceptance for individuals (Venkatesh, et al. 2003).

There is a fundamental relation in the UTAUT model. Performance expectancy, effort expectancy and social influence are factors of behavioural intention. Sequentially, behavioural intentions and facilitating conditions are factors of use behaviour. The above constructs are moderated by four variables for shaping intention and usage behaviour: gender, age, experience and voluntariness of use. These variables are generally described in terms of the demographic characteristics, i.e., age and gender, and psychographic characteristics, i.e., experience and voluntariness. These characteristics greatly impact the behaviour of various steps taken and reaction towards their outcomes (Knowles, 2014).

Gender

Gender moderates performance expectancy, effort expectancy as well as social influence. As research shows, males are likely to have better performance expectancy as compared to females as they incline being task-oriented and task accomplishment is vital to them. Also this instinct comes from gender roles plus socialisation. Gender role contributes to this differentiation between males and females (King, 2006). As for the social influence, females are likely being more sensitive to views of others as compared to males do in order that social influence is more significant in implementing technology to females than to males (Green, 2005).

Age

Age is one more key mediator determinant and it affects the overall major constructs. For performance expectancy, young people are likely being more attracted by extrinsic incentives as compared to old people. Effort expectancy is a more leading factor amongst old people as compared to young people for adopting an innovation (Debusse, 2008). Moreover, old people are more tended placing better salience on social influence, with the effect decreasing with experience. In addition, in the part of facilitating condition, old people are more instinctive to environmental system because their way of learning is more submissive and based upon experience.

Experience

Experience has an effect on effort expectancy, social influence as well as facilitating condition of adopter. For individuals who do not have much experience with a newer system, effort expectancy is more a significant aspect in forecasting behavioural intention (Chiu, 2008). In contrast, if the experience is in a latter phase, effort expectancy does not put forth much effect on behavioural intention.

In addition, the social influence has certain impact on behavioural intention throughout the earlier phases of experience, whereas its effect fades as experience of people regarding the latest technology develops into latter phase. With regard to facilitating condition, it becomes a more vital determinant to behavioural intention as experience with the newest systems gets increased in order that obstacles towards sustainable usage can be eliminated (Benbasat, 2007).

Voluntariness of Use

It can merely moderate effect of social influence on behavioural intention. Social influence exerts its influence to fullness under mandatory contexts as it directly affects intention, whereas it spends more efforts to affect behavioural intention under voluntary contexts (Baron, 2006).

Research Design and Hypothesis

Research Method

The methodology adopted for this research is quantitative and the data-collection method is online survey. The online survey was implemented because the targeted sample is contactable through email and data entry and analysis are easier. The aim of the survey was to collect a wide range of observations/ opinions about the acceptance and use of PYP Infosys. It was necessary to find out the extent to which this system is accepted and used and the factors that affect such acceptance and use. Another main reason for using a survey was the paucity of any previous similar research in the Saudi Arabian context, in general, and in Saudi universities, in particular. Thus, collecting a wide range of opinions and practices led to providing perceptions and a basis on which the research constructs and dimensions were built.

The research model is Venkatesh, et al. (2003) model in which the behavioural intention is influenced by four factors: performance expectancy, effort expectancy, social influence and facilitating conditions. The associations between behavioural intention and these factors are moderated by factors: age, gender, experience and voluntariness of use. The behavioural intentions then influence the use behaviour. As there is no female teaching or working in PYP and the use of systems was mandatory, gender was excluded from the moderating factors.

Hypothesis Development

Based on this model, the following hypotheses were proposed:

- H₁: Performance expectancy has a positive influence on user intention to use PYP Infosys.
- H₂: Effort expectancy has a positive influence on user intention to use PYP Infosys.
- H₃: Social influence has a positive influence on user intention to use PYP Infosys.
- H₄: Facilitating condition has a positive influence on user use of PYP Infosys.
- H₅: The influence of performance expectancy on behavioural intention is moderated by age.
- H₆: The influence of effort expectancy on behavioural intention is moderated by age and experience.
- H₇: The influence of social influence on behavioural intention is moderated by age, experience and voluntariness of use.
- H₈: The influence of facilitating condition on use behaviour is moderated by age and experience.

The following is the research framework adapted for this research,

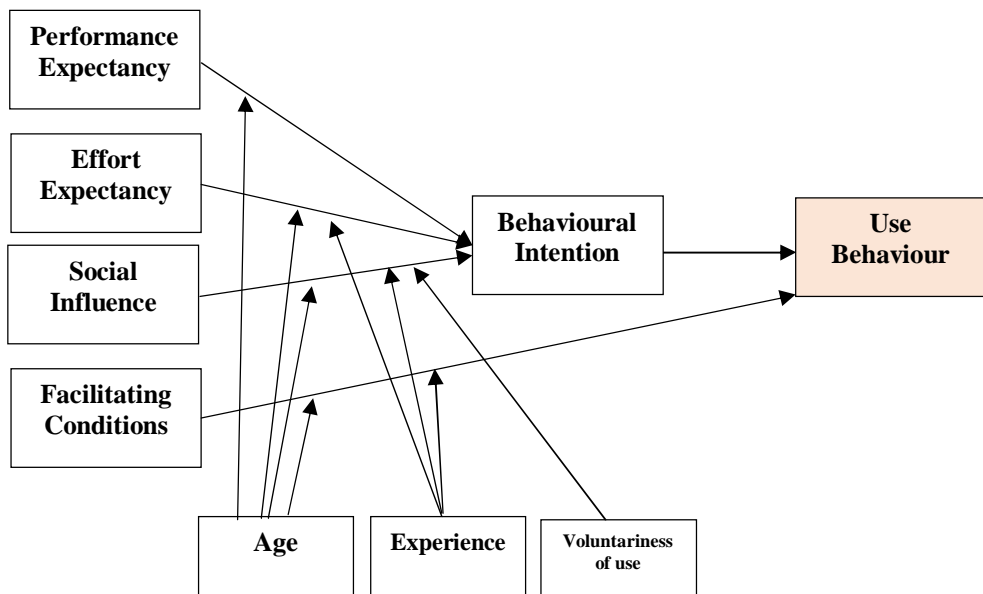


Figure 1: UTATU Model- Adapted from Venkatesh, et al. (2003)

The Survey Administration

The survey items were adapted from Venkatesh, et al. (2003) with little modifications and changes to suit the purpose and the context of this research. The participants were asked to show their level of agreement with different statements about the above-mentioned research constructs based on 7-point scale where: 1 represents 'strongly disagree', 2 represents 'disagree', 3 represents 'mildly disagree', 4 represents 'no opinion', 5 represents 'mildly agree', 6 represents 'agree' and 7 represent 'strongly agree'. Due to the availability of all targeted participants' e-mails, an online survey was developed and used. Invitation email was sent to 220 staff at PYP with the survey link and only 91 responded, representing a 41% response rate.

Participants Profile

Below is the participants' profile as regards to their roles, their age, their majors and experience. Descriptive statistics was used to determine the sample structure in terms of variables: role, age, and major. It was decided to use frequencies as the most appropriate and most transparent descriptive method for this purpose.

Descriptive statistics performed on the variable role showed that majority of respondents (76.9% of them) had a role of the faculty. Following two roles, which were given as option – educational affairs and course coordinator, are occupied in a significantly smaller number – 12.1% of respondents marked educational affairs as their answer, while 11% of respondents chose course coordinator as their answer. In the following table, reader can observe the calculated frequencies on the sample of 91 respondents.

Data Analysis

	Role	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Educational Affairs	11	12.1	12.1	12.1
	Course Coordinator	10	11.0	11.0	23.1
	Faculty	70	76.9	76.9	100.0
	Total	91	100.0	100.0	

Table 1: (Sample structure based on the participants' role)

Same procedure was undertaken on the next demographic variable of interest – age. Descriptive statistics shows that majority of the respondents is 40 years or more. Significant percentage of respondents (29.7%) falls into category from 36 to 40 years.

Apparently, the chosen sample mostly consists of populations of people who had their first encounter with computers later in their life, which may be significant for the research. Age structure of the sample is shown in the table below:

Age	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-25	1	1.1	1.1
	26-30	6	6.6	7.8
	31-35	19	20.9	28.9
	36-40	27	29.7	30.0
	more than 40	37	40.7	41.1
	Total	90	98.9	100.0
Missing	System	1	1.1	
Total		91	100.0	

Table 2: (Sample structure based on the participants' age)

Descriptive statistics has also been done for the question in which respondents were asked to mark the field in which they got a degree. The largest portion of the sample (40%) consists of the people who gained their degree in the field of English language. Computer majors hold second position, but they are present in far less number – 16.5% of respondents majored in computer science. Detailed structure of the sample (based on their major) can be seen in Table 3.

Major	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Computer	15	16.5	16.5
	English	37	40.7	57.1
	Mathematics	5	5.5	62.6
	Physics	6	6.6	69.2
	Chemistry	14	15.4	84.6
	Biology	10	11.0	95.6
	Engineering	1	1.1	96.7
	Arabic	3	3.3	100.0
	Total	91	100.0	100.0

Table 3 (Sample structure based on the participants' major)

For the purpose of the research, respondents were asked how many times they have used systems and the results showed that 60.4 % of the sample consisted of individuals who only once or even never had an encounter with a similar system. Again, based on the results shown in Table 4, it can be confirmed that experience is a possible moderator variable in the proposed model.

How many systems		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Zero	27	29.7	29.7	29.7
	One	28	30.8	30.8	60.4
	Two	13	14.3	14.3	74.7
	Three	7	7.7	7.7	82.4
	More than Three	16	17.6	17.6	100.0
	Total	91	100.0	100.0	

Table 4 (Participants' Previous Experience with similar systems)

Reliability Analysis

The purpose of reliability analysis is to ensure and measure the internal consistency of the survey instrument. The internal consistency refers to the extent to which the items of certain variables are homogenised (Zikmund, et al., 2009). According to Zikmund, et al. (2009), the most common method to measure the internal consistency is by Cronbach's Alpha. It is between 0 and 1, where between 0.8 and 0.95 refers to very good reliability, between 0.7 and 0.8 refers to good reliability, between 0.6 and 0.7 refers to fair reliability and below 0.6 refers to poor reliability of the scale.

In order to continue with the analysis of the results, it was necessary to determine that the questionnaire used for this research is reliable. Reliability test was conducted and Cronbach's Alpha is used as a measure of scale's reliability.

This measure is compatible with the format of the questionnaire – scales consisting of multiple questions (Likert scale). The results showed that value of Cronbach's Alpha for different scales ranged from good to excellent. It is common in statistics that values above 0.70 are considered to be good, while those above 0.90 are considered to be excellent. In the following table, results from the SPSS analysis have been summarized in one place.

Factor	Cronbach's Alpha
Use Behavior	.925
Behavioral intention	.977
Performance expectancy	.935
Effort expectancy	.961
Social influence	.911
Facilitating Condition	.779 (one item was deleted)
Voluntariness of use	.725 (one item was deleted)

Table 5 (Cronbach's Alpha Values)

Results and Discussion

Following are the results and discussion of findings along with the summarized data in the form of tables.

Factors		Items	Mean	Std. Deviation
Usage	Use1	I use PYP InfoSys to enter my students' marks.	6.33	1.63
	Use2	I use PYP Infosys to evaluate my coordinator/faculties	6.10	1.56
	Use3	I use PYP Infosys to view/print my invigilation duties	5.97	1.62
Intention behavior	IntUse1	I intend to use PYP Infosys in the next 2 years.	6.13	1.55
	IntUse2	I predict I would use PYP Infosys in the next 2 years.	6.00	1.65
	IntUse3	I plan to use PYP Infosys in the next 2 years.	6.07	1.67
Performance expectancy	Perexp1	I would find PYP Infosys useful in my job.	6.22	1.48
	Perexp2	Using PYP Infosys enables me to accomplish tasks more quickly.	5.93	1.61
	Perexp3	Using PYP Infosys increases my productivity.	5.79	1.49
	Perexp4	If I use PYP Infosys, I will increase my chances of getting a raise.	5.29	1.66
Effort expectancy	EffoExp1	My interaction with PYP Infosys would be clear and understandable.	5.91	1.39
	EffoExp2	It would be easy for me to become skillful at using PYP Infosys.	5.96	1.53
	EffoExp3	I would find PYP Infosys easy to use.	6.01	1.60
	EffoExp4	Learning to operate PYP Infosys is easy for me.	6.09	1.55
Social influence	SocInf1	People who influence my behavior think that I should use PYP Infosys.	5.52	1.54
	SocInf2	People who are important to me think I should use PYP Infosys.	5.70	1.52
	SocInf3	The senior management of this business has been helpful in the use of PYP Infosys.	5.97	1.39
	SocInf4	In general, the organization has supported the use of PYP Infosys.	6.03	1.37
Facilitating condition	FaciCond1	I have the resource necessary to use PYP Infosys.	5.79	1.39
	FaciCond2	I have the knowledge necessary to use PYP Infosys.	6.10	1.45
	FaciCond4	A specific person (or group) is available for assistance with system difficulties.	5.42	1.72
Voluntariness of use	Volunt1	Although it might be helpful, using a PYP INFOSYS is certainly not compulsory in my job.	3.63	2.00
	Volunt2	My boss does not require me to use a PYP INFOSYS.	2.82	1.96
	Volunt3	My superiors expect me to use a PYP INFOSYS.	2.31	1.56
	Volunt4	My use of a PYP INFOSYS would be voluntary (as opposed to require by superiors/job).	3.66	2.05

Table 6 (Summarized Data Analysis)

Once when it was established that the data obtained were appropriate for further analysis, principal components analysis was conducted. The intention was to establish how many factors significantly add to explanation of the variation in the variable of interest – behavioural intention.

In order to proceed with the principal component analysis, it was necessary to compute variables of interest: use behaviour, behavioural intention, performance expectancy, effort expectancy, social influence, facilitating condition, and voluntariness of use. The analysis showed that there are four main factors which can be used to explain the variance in behavioural intention. The exact findings can be seen in the following table (Table 6). What is important is that the number of factors obtained with this analysis coincides with the number of factors proposed by the model.

Comp.	Initial Eigenvalues			Extraction Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Cumulative %
1	15.301	58.851	58.851	15.301	58.851	58.851	39.987
2	2.005	7.710	66.561	2.005	7.710	66.561	62.134
3	1.676	6.447	73.008	1.676	6.447	73.008	70.220
4	1.009	3.881	76.888	1.009	3.881	76.888	76.888

Table 6: Results of the principal components analysis

The next step in the analysis is moderated regression. The purpose of the moderated regression is to determine whether the influence of the main four variables from the model is mediated by variables: age, experience and voluntariness of use. However, before conducting moderated regression, it is necessary to check whether all correlations between variables of interest are statistically significant. In order to test the hypothesis, the influence of performance expectancy on behavioural intention as

moderated by age variables, performance expectancy, behavioural intension and age were correlated.

		Performance expectancy	Behavioral intension	Age
Performance expectancy	Pearson Correlation	1	.792**	.040
	Sig. (2-tailed)		.000	.709
	N	91	91	90
Behavioral intension	Pearson Correlation	.792**	1	.011
	Sig. (2-tailed)	.000		.921
	N	91	91	90
Age	Pearson Correlation	.040	.011	1
	Sig. (2-tailed)	.709	.921	
	N	90	90	90

** . Correlation is significant at the 0.01 level (2-tailed).

Table 7 (Pearson's correlations)

Following hypothesis was the influence of effort expectancy on behavioural intension as moderated by age and experience. In order to test it, effort expectancy, behavioural intension, age, and experience were correlated. Again, based on the correlation only, it was determined that hypothesis cannot be confirmed.

		Behavioral intension	Age	Experience	Effort expectancy
Behavioral intension	Pearson Correlation	1	.011	-.002	.825**
	Sig. (2-tailed)		.921	.982	.000
	N	91	90	91	91
Age	Pearson Correlation	.011	1	.276**	.004
	Sig. (2-tailed)	.921		.008	.969
	N	90	90	90	90
Experience	Pearson Correlation	-.002	.276**	1	-.112
	Sig. (2-tailed)	.982	.008		.290
	N	91	90	91	91
Effort expectancy	Pearson Correlation	.825**	.004	-.112	1
	Sig. (2-tailed)	.000	.969	.290	
	N	91	90	91	91

** . Correlation is significant at the 0.01 level (2-tailed).

Table 8 (Pearson's correlations)

Hypothesis that the *influence of social influence on behavioural intension is moderated by age, voluntariness of use and experience* was also tested in the same way. Variables of interest were correlated. This hypothesis was also not confirmed, as there was no base for conducting moderated regression because of the statistically insignificant correlations, which can be seen in the following table:

		Behavioral intension	Age	Voluntariness of use	Social Influence	Experience
Behavioral intension	Pearson Correlation	1	.011	-.298**	.738**	-.002
	Sig. (2-tailed)		.921	.004	.000	.982
	N	91	90	91	91	91
Age	Pearson Correlation	.011	1	-.110	.027	.276**
	Sig. (2-tailed)	.921		.303	.800	.008
	N	90	90	90	90	90
Voluntariness of use	Pearson Correlation	-.298**	-.110	1	-.346**	.138
	Sig. (2-tailed)	.004	.303		.001	.193
	N	91	90	91	91	91
Social influence	Pearson Correlation	.738**	.027	-.346**	1	-.051
	Sig. (2-tailed)	.000	.800	.001		.628
	N	91	90	91	91	91
Experience	Pearson Correlation	-.002	.276*	.138	-.051	1
	Sig. (2-tailed)	.982	.008	.193	.628	
	N	91	90	91	91	91

** . Correlation is significant at the 0.01 level (2-tailed).

Table 9 (Pearson's Correlations)

The last hypothesis connected with moderating variables - *The influence of facilitating condition on use behaviour is moderated by age and experience* was also not confirmed. Again, there were correlations which were not proven to be statistically significant, as it can be seen in Table 10.

		Behavioral intension	Age	Experience	Voluntariness of use
Behavioral intension	Pearson Correlation	1	.011	-.002	-.298**
	Sig. (2-tailed)		.921	.982	.004
	N	91	90	91	91
Age	Pearson Correlation	.011	1	.276**	-.110
	Sig. (2-tailed)	.921		.008	.303
	N	90	90	90	90
Experience	Pearson Correlation	-.002	.276**	1	.138
	Sig. (2-tailed)	.982	.008		.193
	N	91	90	91	91
Voluntariness of use	Pearson Correlation	-.298**	-.110	.138	1
	Sig. (2-tailed)	.004	.303	.193	
	N	91	90	91	91

** . Correlation is significant at the 0.01 level (2-tailed).

Table 10: (Pearson's correlation)

Multiple regressions was conducted in order to see which of the four proposed factors has the greatest influence on the dependent variable once all factors are entered into the model. As a result, it was shown that the variable effort expectation has the largest impact on the variable use intention. This was concluded based on the coefficient's size (Table 11):

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	-.373	1.663		-.224	.823
	performance expectancy	.173	.115	.208	1.503	.137
	Social Influence	.225	.087	.245	2.591	.011
	effort expectancy	.355	.124	.429	2.855	.005
	Facilitating conditions	.039	.126	.029	.306	.760

a. Dependent Variable: behavioural intension

Table: 11 (Multiple regression analysis)

Following four hypotheses were tested using linear regression:

- a) H_1 : Performance expectancy has a positive influence on user intention to use PYP Infosys.
- b) H_2 : Effort expectancy has a positive influence on user intention to use PYP Infosys.
- c) H_3 : Social influence has a positive influence on user intention to use PYP Infosys.
- d) H_4 : Facilitating condition has a positive influence on users' use behavior of PYP Infosys.

It was confirmed that performance expectancy has a positive influence on user intention as the coefficient is positive and statistically significant.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.897	1.289		2.248	.027
	performance expectancy	.659	.054	.792	12.225	.000
a. Dependent Variable: behavioral intension						

Table: 12 Coefficient value

Linear regression also showed that effort expectancy had a positive influence on user intention to use the system. Again, coefficient B was positive and statistically significant.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.825	1.222		1.494	.139
	effort expectancy	.683	.050	.825	13.780	.000
a. Dependent Variable: behavioral intension						

Table 12 (Coefficient value)

Variable social influence was also confirmed to have positive influence on the dependent variable of interest, as shown in Table 14.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.469	1.560		1.583	.117
	Social Influence	.677	.066	.738	10.329	.000
a. Dependent Variable: behavioral intension						

Table 134 (Coefficient value)

Finally, the last hypothesis was also confirmed, as it was shown that facilitating condition has positive influence onto the users' behaviour when it comes to managing the system.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.112	1.863		-1.133	.260
	fraction	.967	.087	.764	11.156	.000
a. Dependent Variable: use						

Table: 145 (Coefficient value)

From the above analysis and discussion, it can be concluded that the hypothesis concerning the positive influence of the four chosen factors was confirmed. Also, the principal component analysis showed that there are four factors extracted from the questionnaire used in this research, which is compatible with the proposed model. However, four hypotheses concerning moderator variables were not confirmed, the reason for which may lie in the sample structure. As the descriptive statistics show, sample of respondents is highly homogenous when it comes to the variables: age and experience.

In order to test whether these variables do have influence on the independent variables in the model, another sample, more representative one, should be chosen. In this case, sampling was restricted by the objective of the research. However, there is doubt that these results could have been different on another sample, but that may be the topic for another research.

Conclusion

In contemporary educational systems, information system has become a backbone and presents certain advantages towards achieving excellence and better management. Covering all aspects of an educational system, from faculties to students' convenience, information system is being adapted in every education division and institute around the world. The paper has examined the advantages of Infosys which are benefiting the educational institutes along with the factors impacting and influencing the use and adaptation of Infosys with a particular reference and analysis of Preparatory Year Programme in Jazan University.

An online survey has been conducted on faculty and other participants of research on the four-factor model which was adapted to gauge the behavioural intentions. These four factors included: performance expectancy, effort expectancy, social influence and facilitating conditions moderated by the factors including gender, age, voluntariness and experience. Through the quantitative research method and application of analytical tools on the collected data on all these variables, it can be concluded that the four factors, i.e. performance expectancy, effort expectancy, social influence and facilitating conditions have been found positively influencing the adoption and use of PYP Infosys. However, due to the homogenous sample of participants in terms of age and experience, the moderating four factors including age, experience, gender and voluntariness of use have not been found positively linked and influencing PYP Infosys.

The participants' profile was of main concern in the study because of the analysis of use of Infosys and its advantages can only be done through the participants' views and it has been found that a majority of sample participants comprised of the people who have only once or never encountered with a similar system. The other step to ensure the research-method accuracy was the conduct of reliability test on the survey and administered questionnaire.

This step has also been conducted to make sure and measure the internal consistency of research instrument. Through all these linear regressions done on the sampling population in SPSS analysis, it can be said that the research instruments were consistent and reliable to be used to extract accurate and coherent result. The results have been drawn on the fact that all the correlation statistic show above 0.9 correlation factor. Further analysis has done to analyse the principle components of study, i.e. the four variables identified to be used.

Next, the moderated regression was conducted with the purpose to determine the influence of the four moderating variables including age, experience, gender and voluntariness of use. However, the statistical significance was not sufficient fulfilling the requirements. Thus, the data collected after the SPSS analysis, and thus, of less statistical significance, the moderated regression cannot be done as correlation factors were found less than 0.

Afterwards, four hypotheses were analysed and checked on their statistical significance finding that the influence of effort expectancy on behavioural intentions moderated by age and experience is not confirmed because of the less statistical significance and less correlation found. Again, the hypothesis of finding the influence of facilitating conditions on behavioural intentions is not confirmed which was moderated by the factors of experience and age.

The hypothesis of influence of performance expectancy on behavioural intentions was moderated by all the four variables and it was partially confirmed that increased performance expectancy resulted in increased behavioural intentions and use of PYP Infosys. The last hypothesis was to check the social influence and it has also been found as 'not-confirmed'. It was moderated by the variables of age, experience and voluntariness of use. However, it was found that the variables of interest were correlated. Then the multiple regression was applied on the data collected to know which of the factor has the most significant influence on the behavioural intention. And it has been found that the variable of effort expectancy has the largest impact on the intentions as compared to the rest of three variables.

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