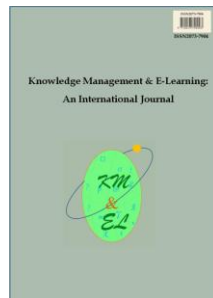

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Electronic portfolio motivational factors from students' perspective: A qualitative study

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Electronic portfolio motivational factors from students' perspective: A qualitative study

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Abstract: Electronic portfolio (e-Portfolio) is known as an electronic learning record which collects the learning evidences, reflections and accomplishments. In fact, it tells the story of learning achievements. It is an important tool for students, lecturers, administrators and faculties to monitor the learning outcomes. Similarly to other technologies, e-Portfolio is also considered successful, if it is used by students continuously. Previous researches showed the importance of intrinsic and extrinsic motivations in using any technologies. However, lack of motivation has been a major concern for developing any successful online learning environments. The aim of this paper is to explain the e-Portfolio motivational factors from students' perspective. Interviews are conducted with students from one university in Malaysia in order to get better understanding of the phenomena. The target interviewees are bachelor students chosen from different faculties. Based on the qualitative content analysis of the interviews, the motivational factors affecting the continuous use of e-portfolio are coded in eight themes and then they categorized in four main groups of individual, system, social and environmental characteristics. Finally they are classified into intrinsic or extrinsic motivations.

Keywords: Electronic portfolio; e-Portfolio; Motivation; Motivational factors; Continuous use

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1. Introduction

The development of internet-based applications in higher education has provided new opportunities for students, lecturers and administrators. They are rapidly changing the nature of tools from manual to electronic versions to deliver more efficient and effective services (Sutarso & Suharmadi, 2011).

Electronic portfolios or e-Portfolios are one of those tools that have been appeared in education since the emerging of personal computers till on the internet with verity of formats (Barrett, 2010). The electronic portfolios utilisation in educational context has increased over the past 25 years (Kimball, 2005). In the 1980s, the electronic portfolios were simple file folders just for recording evidence of progress and achievements, and reflections, in the computer hard drive. Portability was limited to floppy disks or optical disks to accommodate multimedia file formats such as images and video (Campbell, 1996). They developed with the new features over the years. One of the most common features of the internet is the World Wide Web, which allows access to a numerous number of homepages composed in hypertext mark-up language (HTML) (Laudon & Traver, 2003). This technology has been applied to the electronic portfolios as well (Kimball, 2005).

e-Portfolios considered as an extension to e-learning. They have become an important research topic in the last few years (Buzzetto-More & Alade, 2006; Fernández, 2008; Mu, Wormer, Foizey, Barkon, & Vehes, 2010; Stevenson, 2006). The e-portfolio influence and impact on learning performance has been understood (Ayala, 2006). According to some researchers, the e-Portfolio may have the most significant effect on education since the introduction of formal schooling (Love, McKean, & Gathercoal, 2004). Tosh, Light, Fleming, and Haywood (2005) stated that “the e-portfolio is (or should be) part of a student-centered approach to learning which makes it possible for students to actively engage in their learning rather than just be the recipients of information”. Therefore, the use of e-portfolio is an important issue in higher educations.

However, any teaching tools including e-Portfolio, will not be completely successful if students are not engaged in the system (Tuksinvarajarn & Todd, 2009). Despite of the investment in e-Portfolios, some universities complain that its usage is not actually continued by students. The learners will abandon the utilization because they are not really motivated to use it, such as one of the Malaysian public universities.

The role of motivation in learning process has been investigated in previous researches (Deci, Vallerand, Pelletier, & Ryan, 1991; Deci, Koestner, & Ryan, 2001; Glynn, Aultman, & Owens, 2005; Maclellan, 2008). Majority of researches available on the use of e-Portfolio concentrate on faculty and institutional perspectives and also the

usefulness of e-Portfolio for learners (Tosh, Light, Fleming, & Haywood, 2005). Although, there is little attention on student perceptions of e-Portfolio value to increase more student engagement and motivation to use. Besides, studies which have assessed student perceptions are still unclear about the factors expected to influence the perceptions (Chye, Liao, & Liu, 2013).

Accordingly, students need to understand why they are using e-Portfolio and what is in it for them (Tosh, Light, Fleming, & Haywood, 2005). Moreover, still no major research studies thoroughly examine the factors influencing student motivation to use the e-portfolio continuously (Mobarhan, Majidi, & Abdul Rahman, 2014). An extensive e-Portfolio literature review reveals that e-Portfolio systems are widely used but still not thoroughly studied in all their different dimensions (Balaban, Mu, & Divjak, 2012). These are the reason to study the factors affecting student motivation to use e-Portfolio.

2. Background

2.1. Electronic portfolio

There are various definitions for e-Portfolios. e-Portfolios have different meanings among different users. Student, faculty, lecturer, academic advisors, deans, career centers and professional organizations all expect different functions of an e-Portfolio system (Jafari, 2004).

According to Barrett (2010), “e-Portfolio is an electronic collection of evidence that shows the student’s learning journey over time”. Evidences may consist of writing samples, photos, videos, research projects, observations by mentors and peers, and/or reflective thinking (Barrett, 2010). Paulson, Paulson, and Meyer (1991, pp. 5) defined that “The portfolio is a laboratory where students construct meaning from their accumulated experience”. They mentioned e-Portfolio as a form of storytelling: “A portfolio tells a story. It is the story of knowing. Knowing about things... Knowing oneself... Knowing an audience... portfolios are students' own stories of what they know, why they believe they know it, and why others should be of the same opinion”.

Based on the existing definitions, this paper will summarize that e-Portfolio is an online tool which allows students to collect, update and share their information and experiences. The students can reflect on their learning, communicate with their lecturers and friends and get feedbacks to improve their learning outcomes.

According to Smith and Tillema (2003), there are four different types of portfolios, which may can apply to e-Portfolio as well. These four different types can be divided into mandatory/voluntary use and selection (promotion, certification)/learning-development purposes.

- *Dossier portfolio*: is a document of achievement or a mandated collection of work required for a profession or programme (mandated use and selective purposes).
- *Training portfolio*: is a required or mandated collection of learning experience and achievement during a curriculum programme (mandated use and learning-development purposes).
- *Reflective portfolio*: is a purposeful and personally collected evidence of accomplishments for promotion or admission (voluntary use and selective purposes).

- *Personal development portfolio*: is a personal reflective record of professional growth during a long-term process (voluntary use and learning-developmental purposes).

In general, there are three different purposes for e-Portfolio development (Milman & Kilbane, 2005). The first purpose is for students to develop, display and reflect on their own learning (Gray, 2008). The second is for teachers for assessment other than standardized testing, by capturing more fully the multi-faceted, complex nature of student learning (Cummins & Davesne, 2009), while the third is for graduates to showcase their competence to potential employers in job applications (Willis & Wilkie, 2009).

2.2. Motivation

According to Guay et al. (2010), motivation refers to “the reasons of underlying behavior”. It is divided into two broad categories of intrinsic and extrinsic motivation (Deci, Vallerand, Pelletier, & Ryan, 1991):

- *Intrinsic motivation*: means doing an activity for its own sake, because of the feeling of pleasure and satisfaction achieved from its performance. This kind of motivation let people to decide freely to do an activity without any rewards or constraints.
- *Extrinsic motivation*: means doing an activity because of the external resources. It is instrumental in nature. It means that people have to do the activity because of gaining rewards or avoiding any punishments.

Motivation plays a very important role in learning (Glynn, Aultman, & Owens, 2005). Walberg and Uguroglu (1980) explained that “When there is no motivation to learn, there is no learning”. Based on Brophy’s (1988) definition, motivation to learn is “a student tendency to find academic activities meaningful and worthwhile and to try to derive the intended academic benefits from them”. Motivation in the education can be defined as “promoting in students an interest in learning, a valuing of education and a confidence in their own capacities and attributes” (Deci, Vallerand, Pelletier, & Ryan, 1991). According to literature, if learners are motivated, their educational performance will increase due to their interest and curiosity to learn. Sometimes they perform the task when they are intrinsically and extrinsically motivated (Glynn, Aultman, & Owens, 2005). Therefore, it is important to understand the extrinsic and intrinsic motivational factors affecting learners’ motivation.

2.3. Background of motivation in electronic portfolio

Previous researches indicated that the motivation of students while creating their portfolios is an important issue (Al Kahtani, 1999; Chang, 2001; Tosh, Light, Fleming, & Haywood, 2005). According to Al Kahtani (1999) and Tosh, Light, Fleming, and Haywood (2005), a key prerequisite for improving the learning outcome of e-Portfolio is to motivate students. If the students are not enough motivated to use e-Portfolio, it becomes an unpleasant task and the students only put their minimum efforts into e-Portfolio to get required marks. This is the reason to consider that the key issue in e-Portfolio context is to motivate students to spend their time and attempt into their portfolios (Heinrich, Bhattacharya, & Rayudu, 2007). Motivation is really a complicated topic with considering the appropriate theories, interpretations, and strategies (Tuksinvarajarn & Todd, 2009). Tuksinvarajarn and Todd (2009) found that having a

good design, student-teacher contract, personal profiles and a system of feedback and reward will enhance the student motivation to use the system.

Furthermore, according to Barrett (2005), one of the significant challenges today with e-Portfolio is to keep learner intrinsically motivated to willingly engage in the portfolio process. Moreover she assumed that if the learners have more control over their e-Portfolio content, purpose and process, they are intrinsically motivated to use the system. In addition, Buchem (2012) have explored that the greater sense of ownership of e-Portfolio leads to investing more time, energy and effort in e-Portfolio.

The prior researches have shown that motivation plays an important role in encouraging students to use the system continuously. However, based on the literature there are not enough researches in this area (Mobarhan, Majidi, & Abdul Rahman, 2014). That is the reason to conduct current research to address this gap.

3. Method

3.1. Qualitative content analysis

As mentioned earlier, this paper aims to identify the motivational factors which influence the e-Portfolio continuance usage from students' perspective using qualitative study. Qualitative field study can be used to generate, describe, or test a theory (Yin, 2009). As the purpose of the study is not to predict future actions, the focus is on providing a description of the antecedents and on identifying the significant factors affecting student motivation to continue the use of e-Portfolio.

Benbasat, Goldstein, and Mead (1987) pointed out that the qualitative approach is appropriate for exploring certain types of problems, especially those in which research and theory are at their early or formative stages; and difficult, practice-based problems, where the experiences of the actors are important and the context of action is critical.

The method used in this research is qualitative content analysis. In order to do so, semi-structured interviews were conducted with the students. The purpose of interviews was to get students' feedbacks about their experiences with current e-portfolio system. The interviews were recorded and then transcribed.

Qualitative content analysis is defined as "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh & Shannon, 2005). According to Zhang and Wildemuth (2009), there are eight steps for content analysis (Zhang & Wildemuth, 2009). The first step is preparing the data, so the interviews are transcribed. The second step is to define the unit of analysis. Qualitative content analysis usually uses individual themes as the unit for analysis. The third is to develop categories and coding schemes. Here, the coding schemes are derived from interviews' data. The next step is to test your coding schemes on a sample of text. Then, the fifth step is to code all the text. During the coding process, you will need to check the coding repeatedly (Schilling, 2006). After that the coding consistency should be assessed to avoid any mistakes and apply the modifications in the codes based on the coder's new understanding or entering the new codes. Then the conclusions should be drawn from the coded data. It means to make sense of the themes or identified categories, and their properties. At the final step, the findings are reported.

3.2. Participant

For the purpose of this study, the interviews targeted at undergraduate students from one of the Malaysian public universities. These students had used the system and were aware of different e-Portfolio functions. The data were collected from 15 students. They were from faculties of computing, Civil engineering and Chemical engineering. They were in second and third years of their study. More details of interviewees' information are presented in Table 1. The data collection process was stopped as the duplicated data were obtaining and data saturation is occurred.

Table 1
Interviewees' information

| | Categories | Coding Themes |
|-----------------------|--------------------------|---------------|
| Gender | Female | 9 students |
| | Male | 6 students |
| Faculty | Computing | 3 students |
| | Chemical Engineering | 7 students |
| | Civil Engineering | 5 students |
| Years of study | Second Year | 7 students |
| | Third Year | 8 students |
| Usage Duration | 6 semesters | 2 students |
| | 5 semesters | 4 students |
| | 4 semesters | 2 students |
| | 3 semesters | 4 students |
| | 2 semesters | 3 students |
| Usage Reasons | Recommended by lecturers | 15 students |

4. Results

After transcribing the interviews - based on the method described in the previous section- the appropriate themes are assigned to the each part of the interviews' transcript. Totally eight different themes are recognized.

4.1. Service quality

One of the important factors noted by students was about the technical support. This support can be related to university's IT infrastructure or IT support staffs. Most of the students complained that the good conditions have not been provided for them to use the e-Portfolio, as it is presented by the following student's feedbacks:

- The major problem for me is the internet connection. We couldn't access the internet easily. It takes time to load the pages. Sometimes I really don't have time to wait.
- The storage capacity is not enough for me to share my pictures, audios, videos and other texts.
- The period of time that we can access to e-Portfolio record is really important. I mean the duration of e-Portfolio accessibility, even after our graduation.

And some of them mentioned about the technical staff support:

- Some time we have problem while using the system, so we need to have support from administrators, help-desks or guidelines.
- It happens that I have problem and I need help, but the responsible staffs are not available to respond, or it takes time to reply. That's the problem.

Based on the literature, this theme can be mapped to the service quality, which is one construct of IS-Success Model proposed by (Delone & McLean, 2003). Service quality is defined as "the quality of support that system users receive from the IS department and IT support personnel" (Petter, DeLone, & McLean, 2008). In the context of e-Portfolio, it can be defined as "the quality of support that students receive from the IS department and e-Portfolio support personnel".

4.2. System quality

A next important theme was related to the quality of the system itself. One of the factors referred to by students was the Easy use of the system. Some of the students were not satisfied by the current e-Portfolio interface. Some of its functions were not easy for them to use. The students agree that the e-Portfolio user friendliness is an important factor for continuing the usage, as the comments shows:

- Some part of e-Portfolio is not user friendly and easy to use. The current interface has some problems that make it difficult to use.
- It takes time to me to find how to work with different functions of e-Portfolio.

Another factor was functionality of the system. It is defined as the degree to which the users believe the functions of the system are complete and based on their needs (Delone & McLean, 2003).

- I think e-Portfolio can have more attractive functions such as Facebook.
- The e-portfolio functionality is really compatible with the system I used previously (such as blogs).
- E-Portfolio functions are up to date. The university is trying to update its functions repeatedly.

Based on the student's comments, the usefulness and effectiveness of the e-Portfolio in their educational work is important for them to continue the use of the system. When they feel that it can help them to improve their educational outcomes, they would continue its usage. The student's feedbacks are:

- I think the university always tries to provide new and helpful technologies for students and update them with new tools. That's why I believe that e-Portfolio can help me to improve my educational work.

- Using e-Portfolio helps me to see my progress and know about my weaknesses and strengths.
- It is a useful tool to monitor our progress.

In the literature, the ease of use and usefulness are the factors of Technology Acceptance Model (TAM). Ease of use refers to "the degree to which a person believes that using a particular system would be free of effort" and Usefulness refers to "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989). Usefulness and ease of use are considered as two significant motivators which can influence user's post-acceptance decision, because the user should reconsider his/her early acceptance decision during post-adoption stage and decides whether to continue the use of system or not (Rogers, 1995).

The system quality is one component of IS-Success model. It is defined as "the desirable characteristics of an information system" (Petter, DeLone, & McLean, 2008). It also can be also considered as the desirable characteristics of e-Portfolio system for students.

4.3. *Information quality*

Next important factor mentioned by students was the quality of the content of e-Portfolio, as the students' comments show:

- I can get useful information from e-Portfolio, which is related to my learning interest.
- The quality of the content of e-Portfolio is really important to me
- The information obtained from e-Portfolio assists me to solve some of my learning problems and to improve my outcome

Information quality is another component of IS-Success model, which is related to the quality of the information. Information quality is measured in terms of timeliness, completeness, accuracy, relevance, meaningfulness and consistency (DeLone & McLean, 1992). This theme is really important in e-Portfolio, as it associated with the quality of information obtained from the system.

4.4. *Autonomy and ownership*

Another recurring theme was the existence of ownerships and autonomy. The students highlighted that if they are free to develop their e-Portfolio and upload the content based on their choice and interests, they will obviously continue their utilization. Because there aren't any pressure and fears. Some of the student comments in this theme are as follow:

- When I feel free in developing my e-Portfolio content, I enjoy using it. This is a good thing for me.
- I can do e-Portfolio willingly; I can upload my photos, videos and text without any restriction from university or my lecturers.
- I have control over my e-Portfolio. That makes me interested to use, because I can share whatever I want.

It reflects the "Autonomy" in self-determination theory. In this theory, autonomy refers to "the desire to self-organize one's actions, when the individuals can perform the activity based on their own choice and volition" (Deci & Ryan, 2000). Autonomy in the

context of e-Portfolio is “the Students’ desire to utilize the e-Portfolio based on their own choice and volition”. This factor actually can help students to define their own goals for developing their e-Portfolios and to include the artifacts based on their own choice and volition.

4.5. Competence

This theme is linked to the students’ ability to perform a task. One of the cited factors was computer self-efficacy. Computer self-efficacy is defined as the “judgment of one’s capability to use a computer” (Compeau & Higgins, 1995). The student’s responses showed that their computer literacy can affect the way of using the e-Portfolio as well. That is the reason that e-Portfolio can be looked easier for them. Some who did not have good computer skills mentioned that it is a little bit difficult for them to use e-Portfolio.

- I think I’m capable of finding new features of any system and I really feel confident while using technologies.
- I don’t have good computer skills; it’s a little bit difficult to me to use e-Portfolio.

Moreover, some of the students mentioned that due to their previous experiences with weblog writing, it is easier for them to engage with e-Portfolio and upload their posts including their reflections, learning achievements, resume, photos, videos and other artifacts.

- I had some experiences in weblog writing, that’s why I know how to transfer my idea and write reflections in e-Portfolio.

Studies also have shown that the prior experiences can change intention of adoption or continued use of technologies (Liao & Lu, 2008). This theme can be considered as one part of self-determination theory. Competence refers to “the individual tendency to be effective in their interactions with the environments while performing an activity” (Deci & Ryan, 2000). It can be defined in e-Portfolio context as “the students’ desire to be capable and qualified in utilizing the e-Portfolio effectively”.

4.6. Social norms

The next theme is social norms. The students revealed that when other people such as lecturers or academic advisers who are important to students recommend them using e-Portfolio, they may follow their suggestion. Even their feeling about their educational environment including their lecturers and students can motivate them to use e-Portfolio.

- I have good friends and lecturers at university and I’m really interested to be connected with them and see what they are doing and sharing.
- When I see my lecturers and university insist on using the system because of its functionality, I feel confident to use it.

Social norms here are included subjective norms in Theory of Planned Behavior (TPB) and relatedness in Self Determination Theory (SDT). Subjective norm refers to “the perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991), and relatedness refers to “the desire to feel connected to others” (Deci & Ryan, 2000). They are refined in e-Portfolio context respectively as “the perceived social pressure to

perform or not to perform e-Portfolio” and “the desire to feel connected to classmates and lecturers”.

4.7. Consequences of use

Another theme mentioned by the students was the system consequences of use. The interviewees agreed that the use of e-Portfolio would enhance their career opportunities in the future and this is really motivating them to use the system continuously, as the comments indicate:

- One of my reasons for study is to find a good job in the future. So I try to make a good resume in e-Portfolio to have a better chance in future job seeking process.
- I attempt to put all my experiences and achievement to have a complete resume. Because I believe that it can be helpful for me in the future for having a good job.

The perceived consequences theme is consistent with the expectancy theory of motivation proposed by Vroom (1964) and developed further by Porter and Lawler (1968) (Porter & Lawler, 1968). They discuss that for some individuals, the motivation to adopt and use the technologies may relate more to planning for the future rather than addressing current needs (Thompson, Higgins, & Howell, 1991).

4.8. Positive feedbacks

Some of the interviewee’s reason to use e-Portfolio was to get feedback from their friends and lecturers. They believed that it can help them to learn more and correct themselves if they are doing some mistakes.

- I always like to share my idea and get feedback from others to improve my knowledge.
- It’s interesting for me when my lecturers comment on my work, so I can understand my mistakes and weaknesses.

Previous researches also have shown that the positive feedback encouraged users to repeat their posting behavior (Joyce & Kraut, 2006). If the feedbacks are helpful, they would find the system effective too.

These eight themes are discovered by interviewing the students. Then they will be categorized in the four main groups in the next section. We believe that these factors would influence the student’s motivation. Some of them affect intrinsic motivation and some extrinsic motivation.

5. Discussion

This section will first discuss some of the findings from previous researches comparing with this study. Then it would classify the identified themes in different groups.

Majority of researches have look at e-Portfolio adoption and acceptance stage. For example, Chau and Cheng (2010) have used qualitative method and found five major themes for widely adoption of e-Portfolio as an independent learning tool. These themes include choice and ownership, feedback, technological competence, self-improvement and strategies and dual perception. Chen, Chang, Chen, Huang, and Chen (2012) have applied IS-Success model and TAM. Then using quantitative method, they have reported

that usefulness, ease of use, service quality, system quality and information quality, user motivation and self-efficacy are significant factor affecting behavioral intention and attitude towards e-Portfolio usage. Buchem (2012) demonstrated some significant relationships between perceived control, sense of ownership and uses of e-Portfolio systems in the context of higher education. Zainal-Abidin, Uisimbekova, and Alias (2011) investigate the reason for the low acceptance and subsequently to suggest a post-implementation strategy to overcome this issue. They found that Ease of Use, Usefulness, User Friendliness, User awareness and Infrastructure reliability are important factors (Zainal-Abidin, Uisimbekova, & Alias, 2011). Some of these factors are still important in student motivation to continue the use of e-Portfolio, as the themes were presented in previous section.

Consequently, this research explained that the student motivation is influenced by different motivational factors. Eight themes were identified based on the interviews. These themes can be categorized in individual, system, social and environmental characteristics (Table 2).

Table 2
Coding categorization

| Categories | Definitions | Coding Themes |
|---------------|--|--|
| System | The specifications and characteristics which are related to the e-Portfolio system itself. | <ul style="list-style-type: none"> • Information Quality • System Quality • Consequences of use |
| Individual | The specifications and characteristics which are related to the students themselves. | <ul style="list-style-type: none"> • Competence |
| Social | The specifications and characteristics which are related to the interaction of students with others. | <ul style="list-style-type: none"> • Social Norms • Positive Feedbacks |
| Environmental | The specifications and characteristics which are related to the learner environmental conditions and facilities. | <ul style="list-style-type: none"> • Ownership • Service Quality |

System category includes the themes which are related to the e-Portfolio system. This category shows that some of the e-Portfolio features themselves are important in student motivation. System quality, information quality and consequences of use are located in this group. The consequences of use are related to the feature of the e-portfolio system that supports the use of e-Portfolio after graduation and especially in the future job finding. Moreover, the quality of the content of e-Portfolio is related to the system features, as the students are allowed to upload learning and personal information into e-Portfolio. Therefore, they are grouped in system characteristics. The individual category consists of the student's competence and prior experience they had with other similar systems. This group is related to student ability and experiences which influence their continuance intention. The social category is concerned with the social influences on

student motivation and composed of social norms and positive feedbacks. As the positive feedbacks are from their friends or lecturers who are connected with students, it is considered in social category. The last category is the environmental effects on the motivation. It includes facilitating conditions and ownership. The reason for its classification is that the ownership of the system is the extent of university permission and authority given to students to have control over their e-Portfolio. Due to its determination by university, it is considered as one of the university condition. So it can be grouped in the environment category.

Moreover, based on the intrinsic and extrinsic definitions, these four categories can be classified in these two groups. Their classification is based on the source of influences which may be internal or external.

System factor is a form of intrinsic motivation, because it relates to the system. When the system has the required features, then the students will be satisfied and motivated intrinsically. Furthermore, the consequences use of the system can lead to the intrinsic motivation, as the students use the e-Portfolio for their future goals, as well. It means that the consequence of use has internal effects on student's decision to continue using the system. Furthermore, the quality of the content of e-portfolio influences the student intrinsic motivation to continue the use of e-Portfolio.

Individual factors are considered as intrinsic motivation, as they don't need any stimuli from outside. The computer self-efficacy is relates to the students' individual ability to conduct with e-Portfolio. Previous experiences are also associated with the students' knowledge and practices achieved from the similar system usage. Therefore, the competence theme has an internal influence on the students' motivation.

Social factors always come from external sources such as lecturers or friends. That is the reason why they considered as extrinsic motivation. The social norm relates to the effects of the student's lecturer or friends on their decision to whether use the system or not. We considered relatedness as an extrinsic motivation too, because the student relationships with their friends and lecturers in university can lead to the feeling of relatedness.

Environmental factors are also extrinsic motivation. It means that university should prepare them for the students. Facilitating conditions are the facilities that university provides for the students. Autonomy here is determined by university too. It means that the university can identify the degree to which they have choice and they are free to upload their artifacts. So here it is considered as an extrinsic motivation, as all of these factors are grouped based on the source of influences.

These kinds of categorizations can help universities to find the source of the motivational factors which can be concerned with the students, e-Portfolio system, universities and lecturers. Recognizing the sources is useful for universities to facilitate the techniques for improving the usage of the system.

6. Conclusion

The background of e-Portfolio and motivation has been reviewed in this research. The importance of motivation in educational context has been proved by the literature. This paper showed that the motivation plays an important role in e-Portfolio continuous utilization. It aimed at finding the factors affecting the e-Portfolio continuous usage from the student perspective and eight themes were recognized. The themes were linked to four main groups which are related to the characteristics of students, e-Portfolio system,

social interaction and environmental conditions. Then they were grouped into intrinsic and extrinsic motivation, based on the source of the motivations. It is suggested that these important factors should be considered by university, developers and administrators and should be included in the process of e-Portfolio development.

One limitation of this study was its small sample size. Therefore, future researches can be done with larger sample size. Another is that these factors have identified based on the qualitative study, so further research is required to confirm their validity using quantitative approaches. Moreover the relationships between this factors and continuous use of e-Portfolio need to be investigated in future research.

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