

An Analysis of Learners' Attitudes towards the Use of Virtual Learning Environments in Higher Education Institutions

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Abstract. Virtual learning environments (VLEs) are now seen as a core element in higher education courses, offering facilities and functions that can stimulate teaching and learning. Although it is implicitly assumed that VLEs offer improvements in learner learning, the majority of the related findings come from direct questions about learners' satisfaction with learners VLEs. The current study aimed to analyze learners' attitudes towards the use of virtual learning environments in higher education institutions. To find the exact effect that VLEs have on learner satisfaction when it comes to teach and learn in a higher education institution, this research collected information from a total of 128 undergraduate learners completed before and after the introduction of VLEs. The results clearly showed that VLEs have a positive impact on teaching and learning. Besides, it showed that the learner wanted a greater variety of teaching and learning methods, deeper enjoyment, interest and confidence building, and more resources after the VLE was implemented.

Keywords: Virtual Learning Environments, Learner Satisfaction, Smart Learning, Higher Education Institutions

1 INTRODUCTION

The advancement of ICT offers instructors the opportunity to create a VLE and gives learners the opportunity to study outside the walls of the classroom (Akinhanmi, 2019; Rahmila, 2015; Vertesi et al., 2018). The VLE is a web-based learning system that reproduces real-life learning by adding virtual equivalents of traditional concepts of education (Kamalludeen et al., 2016). The VLE is an online learning platform that allows instructors and learners to teach and learn online. Also, able to use information anytime, anywhere, VLE offers benefits such as forums and wikis that allow learners to communicate with friends and instructors (Rogayah & Juhaida, 2019). The VLE can be seen as a dynamic concept due to the regular evolution of digital technology, its capabilities and capabilities, as well as the importance of such an environment in learning processes (Paulo et al., 2017).

VLE offers instructors the opportunity to upload contents, project instructions, and instructions in the form of electronic files (Conrads et al., 2017). Alternatively, the learners can upload their assignments, projects, exercises, and homework to the VLE to be evaluated by their instructors. The VLE is combined throughout course preparation, where learners can find and learn the content that's required for specific classes. The learning experience through VLE supports and promotes the learners towards a positive learning experience are very powerful to engage traditional or online learners (Redzuan et al., 2011). The VLE offers a social aspect of learning in two environments, such as at home and university. With a minimum of technical skills needed to develop a VLE, both of the instructors or learners can use educational content on a website (Rogayah & Juhaida, 2019). VLE adds to higher education institutions the efficiency by increasing knowledge management and improving mastery for activity-seeking knowledge. Berry (2016) said that the VLEs are capable of improving the learning process and motivating learners to learn. This has been encouraging instructors to use the VLE in their teaching.

According to Mei et al. (2017), the VLE is a good method to study, nevertheless, it depends on ease of use and reach to the VLE platform itself. VLE performance can be extended by providing proper technical support for the current VLE process. Alternatively, personnel skills are also contributing to the effectiveness of the implementation of the VLE. The ability of instructors and learners to use the application, ICT devices, service applications for teaching and learning are important in the enforcement of the VLE (Rashid, 2014). Seminars, workshops and training sessions should be delivered to faculty and learners with the necessary computer skills such as the use of tools, content creation and discussion group (Rogayah & Juhaida, 2019).

Preliminary studies have identified some difficulties in implementing the VLE. Razak and Yusop (2013) found some difficulties in implementing VLE, as giving to the inefficiency of VLE is the knowledge of academic staff, who by focusing on instructors such as overtime wanted to respond to the forum, some instructors may have problems with the lack of free time and technical skill to use the technology. Alternatively, Rashid (2014) pointed out that learners were not very prone to the use of the VLE platform through teaching and training sessions in the classroom.

Most of the articles reviewed used direct and specific ways of interviewing learners when it came to their views on the value of VLEs, convincing them to provide accurate assessments of their experience in VLEs. Our research uses a different approach by using the ongoing assessments of undergraduate learners of the teaching and learning they have received at the module level. Changes in learner evaluations in this regard are used to provide a reflective perspective on the observed effect on learner satisfaction after VLEs have been used to facilitate the delivery of two undergraduate courses modules.

The VLEs used in this paper was built with the commercially available computer software Blackboard Learn to facilitate teaching across an undergraduate module. Learner evaluations for the module were employed to in contrast before and after VLE introduction periods. The goal of this paper is to show if there are any substantial findings regarding the advantages of VLEs shown in the learners' experiences of teaching and learning. The purpose of this research is to analyze learners' attitudes towards the use of virtual learning environments in higher education institutions. An ELV can involve amazing components or all of the following:

- Download and upload course syllabus.
- Administrative information about the program: prerequisites, credits, registration, payments, physical education and teacher details.
- Panel for advanced course information.
- The main content of all or part of the course.
- Additional resources, integrated or as links to external resources.
- Self-assessment questionnaires.
- Supports communication, including email, live chats, online chats, Twitter and various media, from time to time with moderator or instructor.
- External links - Paths to all other online mastering spaces are linked by VLE.
- Provide the necessary hyperlinks to create a unique presentation for students.
- An online chart for live virtual lessons.

A VLE is generally no longer designed for a specific path or subject but can assist multiple courses across the full range of the academic curriculum, providing a consistent interface within the organization and, to some extent, with other institutions, the use of the system. The VLE assists in the global change of statistics between a person and the research institute to which they are currently registered via digital media such as e-mail, discussion forums, Web 2.0 sites or a forum. Finally, the current study aimed to analyze learners' attitudes towards the use of virtual learning environments in higher education institutions.

2 METHODOLOGY

2.1 Design

This study used a retrospective mixed measures design (VLE period: before and after). Satisfaction data was collected primarily through a standard university self-report learner Module Evaluation Questionnaire (MEQ) conducted in two undergraduate course modules. Specifically, the modules in question were selected to be included in this study because they had a recognizable and reliable point of introduction for the VLE. This allowed learners' assessments to be compared before and after the VLE over three years. The modules were full-time, face-to-face modules taught, and there were similarities in the way the content was delivered concerning lecture /seminar structure, group work, contact teaching and evaluation. Besides, two Open-ended questions about (areas of the module liked) and (areas of the module disliked).

2.2 Sample

The sample involved 128 undergraduate computer science learners taking courses in 'Foundations of Programming' and 'Advanced Programming' as part of their four-year degree program. There was no demographic

information collected on the sample, and the general demographics covered both traditional and mature learners, with a greater number of females than males.

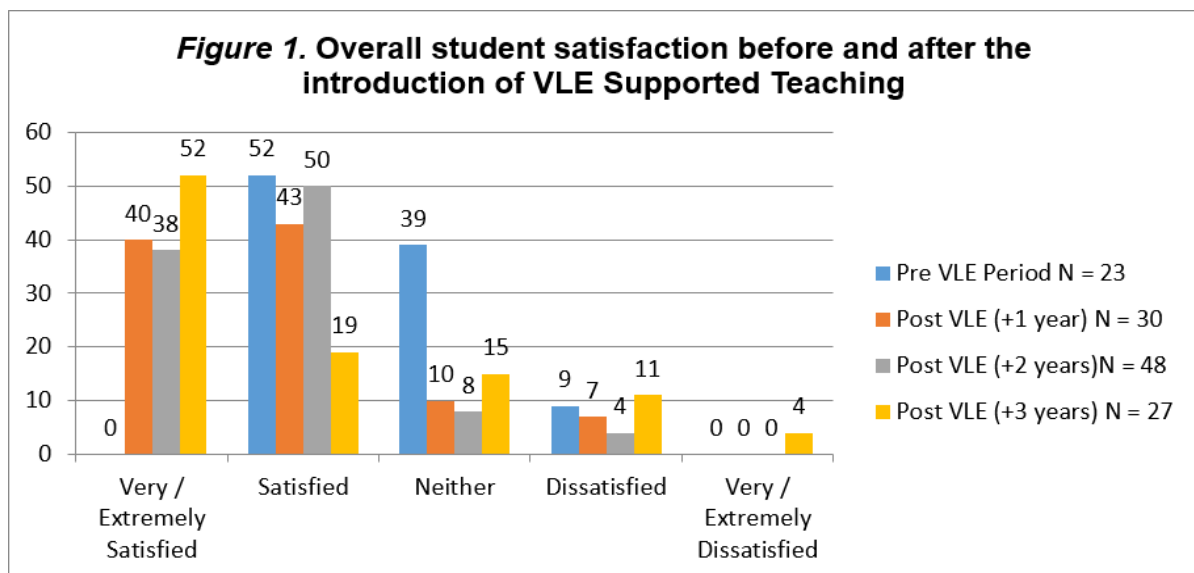
2.3 Materials

The questionnaire was employed at the university to offer learners a chance to appraise the different elements of the module as they had experienced them. Every learner undertook the evaluation questionnaire anonymously once they had finished the specific module sections. The surveys are composed of closed-ended Likert-type statements and open-ended questions which encouraged learners to share their feedback.

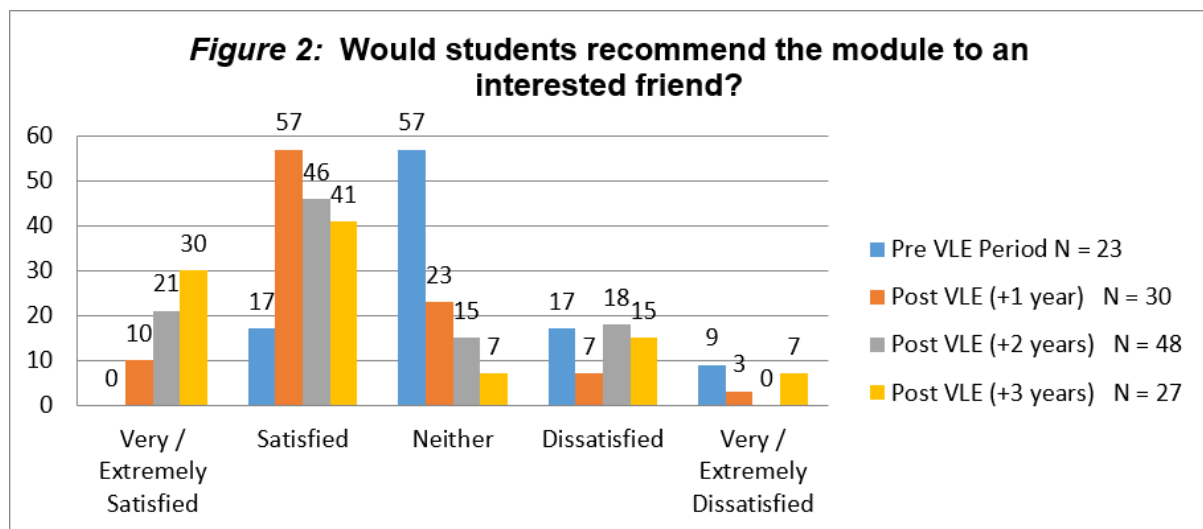
3 RESULTS

3.1 Quantitative Analysis

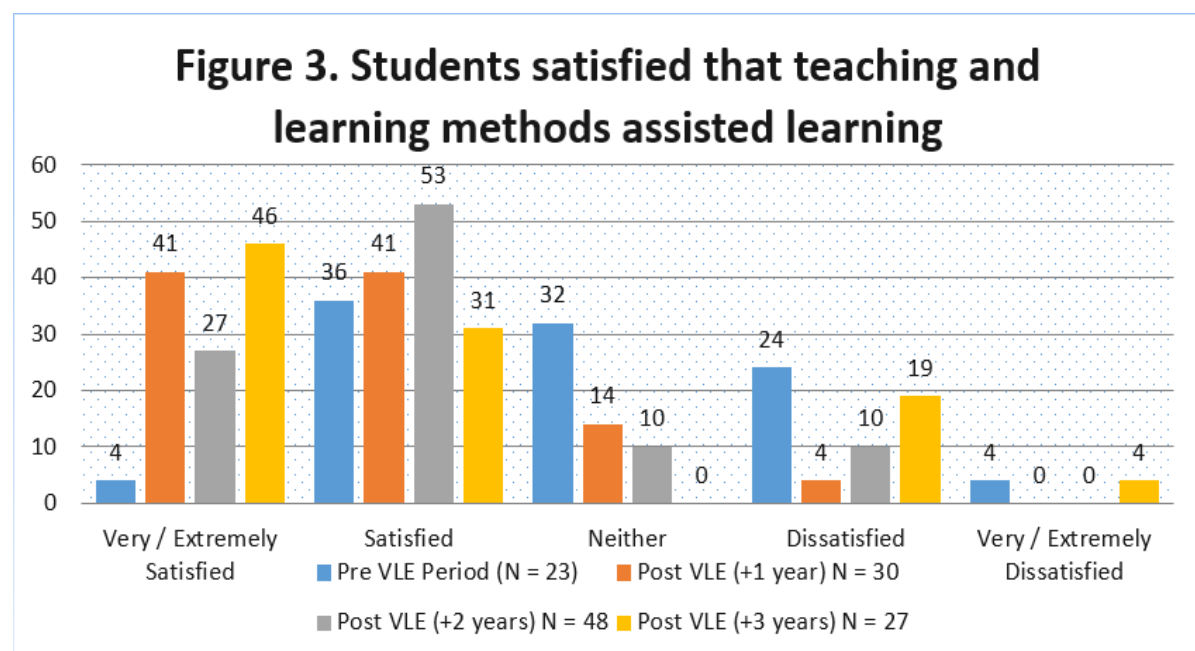
The results show that the learners were satisfied after the introduction of the VLE (see figure 1). This change is also reflected in the drop in the proportion of learners who are not satisfied and dissatisfied, from 39% in the before VLE period to between 8% and 15% after the VLE period.



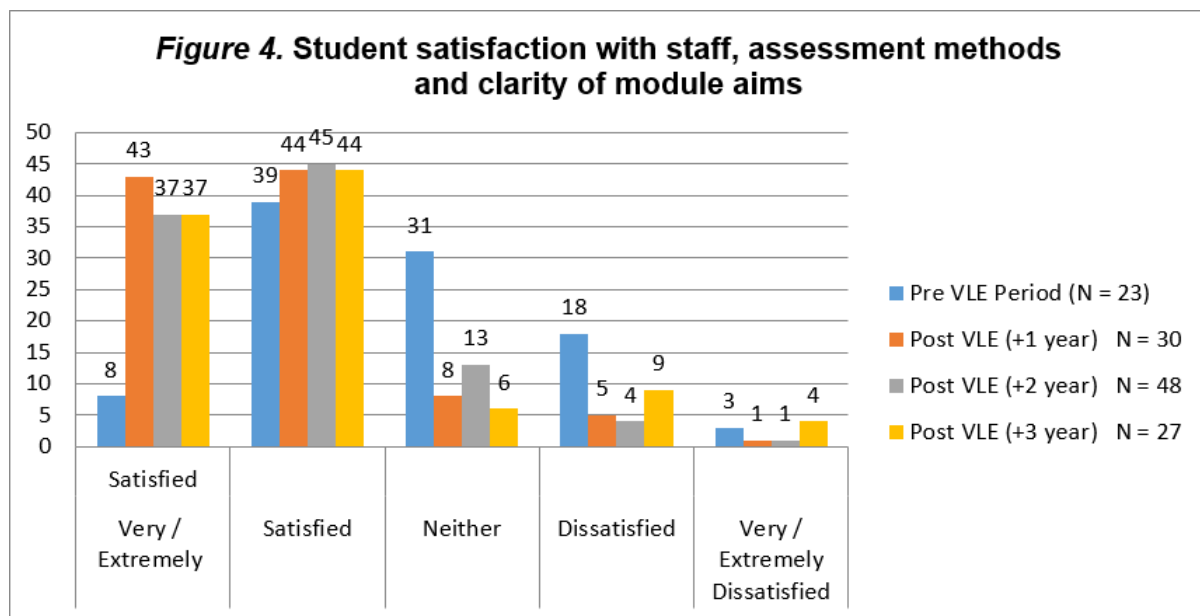
Compared to the before VLE period, all periods after VLE represent a change to recommended positive responses the modules, with an increase in the number of agreeing categories and a decrease in the disagree category in the after VLE periods (see figure 2).



After the VLE periods, there is an increase compared to the VLE period in the percentage of learners who are satisfied that teaching and learning methods have contributed to their learning (see Figure 3).

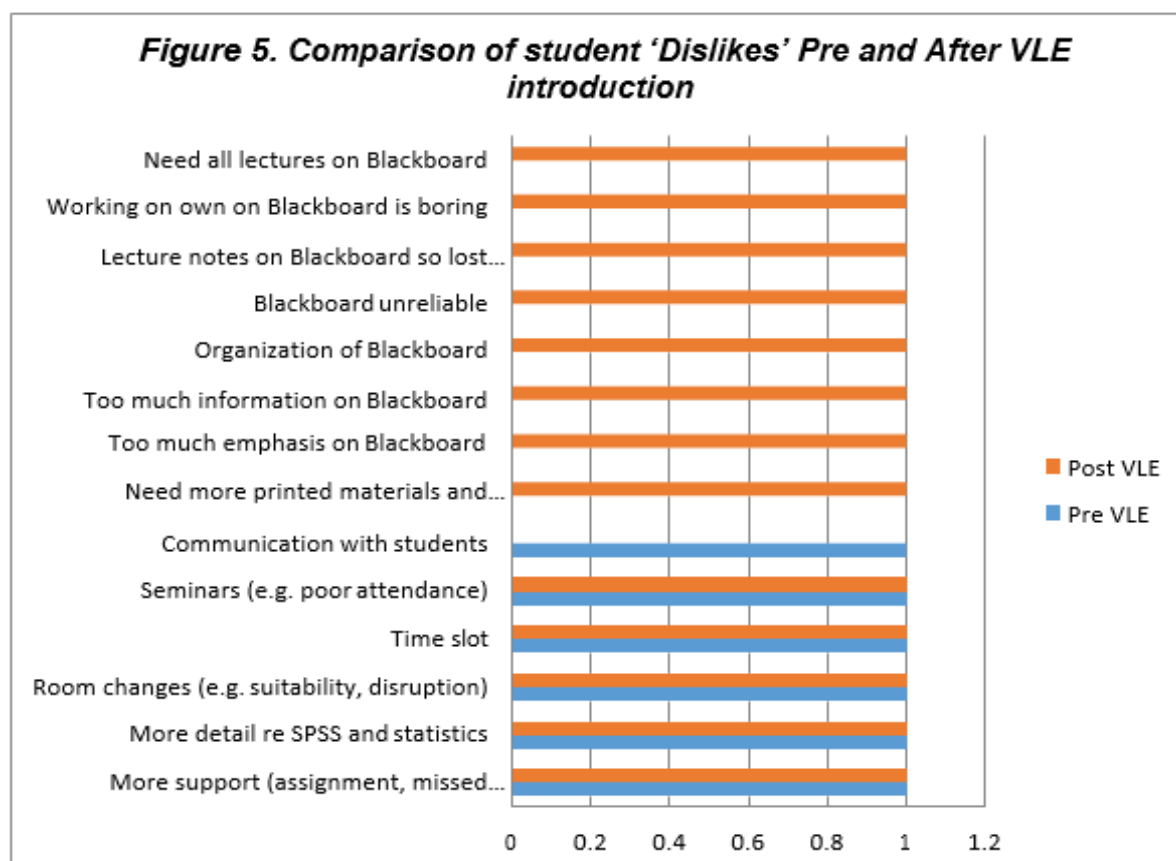


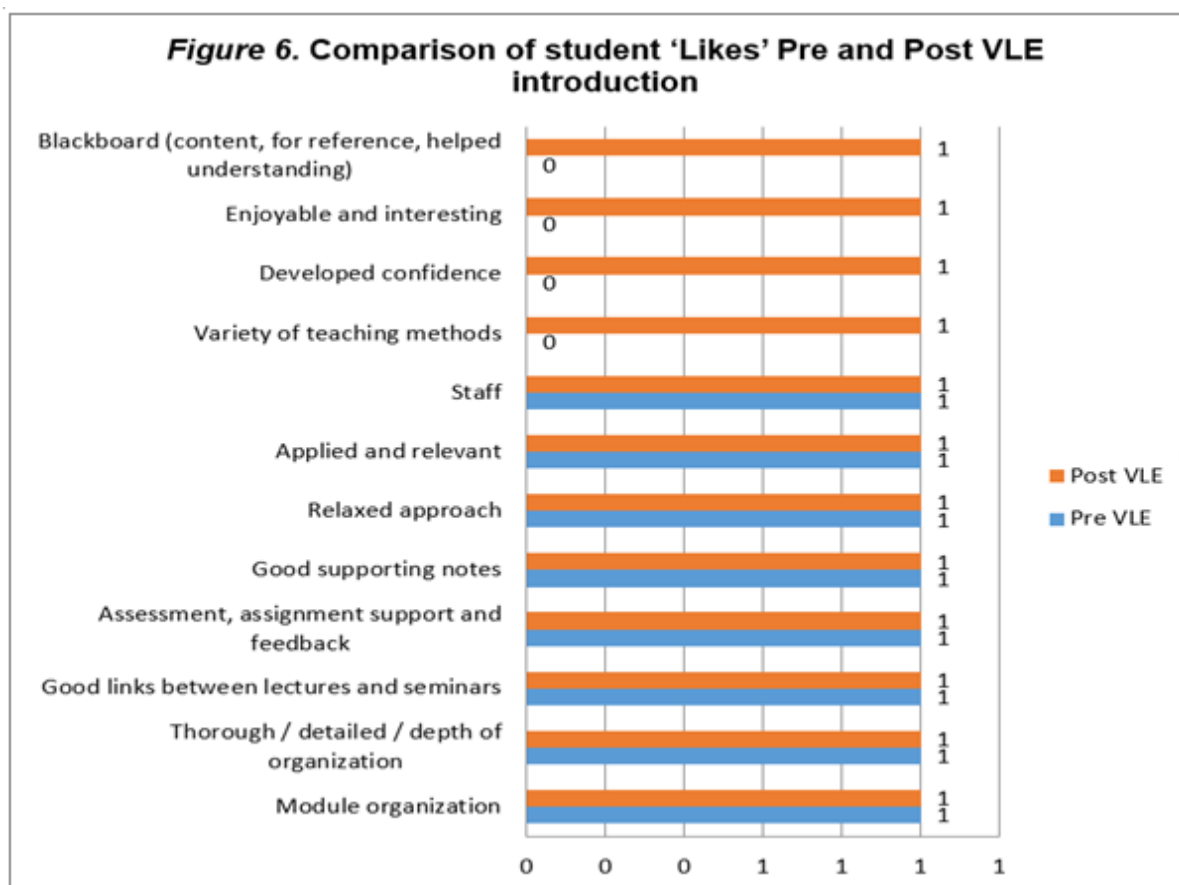
Students' responses to assessment questions, staff performance, and module goals show an increase in the percentage of satisfied students and a decrease in the number of dissatisfied people after the VLE period compared to the before VLE period (see Figure 4).



3.2 Qualitative Analysis

A comparison of learners' reported likes and dislikes before and after VLE for the core module (figure 5 and 6) indicates improved communication with learners, increased enjoyment, interest and confidence and a greater variety of teaching methods after VLE. The VLE itself it also noted as a positive by learners. Negative comments after VLE include organization and reliability of the VLE, inconsistent content and overemphasis on the VLE, the VLE reduced motivation in lectures.





4 DISCUSSION AND CONCLUSION

The purpose of this research was to analyze learners' attitudes towards the use of virtual learning environments in higher education institutions. Even though there has been progressed in VLE technology and their implementation, (Gannon-Leary et al., 2007), the outcomes of these appraisals are varied (De Lang et al., 2006; Love & Fry, 2006; Means et al., 2009; Morrice & Demian, 2012). Smart and Cappel (2006) underlined the fact that a deeper comprehension of user [learner] opinions are necessary, as well as more effective design for VLEs and their applications. This paper attempted to appraise the effect on learner satisfaction when it comes to teaching and learning after VLEs are used, to facilitate the provision of two undergraduate modules.

Overall, the quantitative results clearly show that VLEs have a positive impact on teaching and learning. Self-reports showed the learner satisfaction levels as they were tied to general satisfaction with the module, teaching, learning and assessment methods, teaching staff, clarity of learning objectives and willingness to suggest the module to a friend who wanted to be involved in the course went up considerably for the modules. The greater satisfaction levels appear to be primarily taken into account with a change in the learner responses to the 'neither satisfied nor dissatisfied' choice for the pre VLE period to 'satisfied' or 'very/extremely satisfied' at the after VLE time. This is potentially a sign that the impact was greatest for learners that had contradicting opinions regarding their teaching and learning experiences. A limited effect regarding the proportion of learners dissatisfied or very/extremely dissatisfied before and after VLE was seen.

Qualitative results were in line with the quantitative results, providing extra details into the processes with which VLEs can have a positive effect on learner satisfaction when it comes to teaching and learning. Open-ended teaching and learning module evaluation questions requested that learners put forward 'likes' and dislikes', showing that they wanted a more efficient communication with learners and a greater variety of teaching and learning methods, deeper enjoyment, interest and confidence-building and more resources after the VLE was implemented. Qualitative results additionally showed that there were certain negative findings regarding the

implementation of VLE for the two types of modules. The comments described unreliable content, limited applicability, and clashes between VLE and traditional methodologies which impacted learner motivation (Li & Zhigang, 2010). Reed and Watmough (2015) have stated that there is a requirement for minimum standards to be implemented when it comes to setting up VLEs to overcome learner dissatisfaction, and Rogers (2004) stated that even though most learners were seeing that there was a positive effect by VLEs, a small proportion of learners feel that traditional approaches are preferable for teaching and learning.

Even though the study provides valuable data regarding the potential effect of VLEs when it comes to learner satisfaction, there are obvious disadvantages evident in the results of the current study. Evaluating the effect of VLEs indirectly with learner teaching evaluations is thought to be a more valuable method to appraise with. It is not fully satisfactory as there are many different elements involved in these general teaching evaluations. The paper is additionally restricted when it comes to the sample information provided. Individual differences, including earlier experience of VLEs and computer and Internet user self-efficacy (Alice & Sarah, 2009; Cassidy & Eachus, 2002; Eachus & Cassidy, 2006), methods for learning and self-regulation (Cassidy, 2011) have a high chance of being involved in the efficacy of VLEs (Selim, 2007) and act as ways of showing the different related elements that must be considered in evaluation studies.

Virtual learning environments have a wider attraction, but the advantages presented are tied to numerous context-specific elements, such as course type and ongoing levels of learner satisfaction, establishing critical success factors for deeper learning. Irele (1999) and described self-motivation as a key element for success when it comes to online learning and it must be understood that critical success factors are involved with particular ties to the design and implementation of VLEs (Selim, 2007). McCormick and Li (2006) have stated that the impact of technology is relates to the tools involved and specifically the pedagogical implementation.

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