

## INCREASING STUDENTS' ENGAGEMENT IN BLACKBOARD LEARNING SYSTEM

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### ABSTRACT

*This study explored faculty members' preferable strategies used for increasing students' engagement in Blackboard learning system. These strategies were identified in three domains: Establishing an e-learning community with a sense of belonging, building a well-designed course and providing assessment and feedback. The population consisted of (66) male and female faculty members from four departments in Preparatory Year Program (PYP) - Najran University during the second semester of the academic year 2017-2018. A three-point Likert Scale was used to collect the data. Data was analyzed using descriptive statistics (means, standard deviations, and t-test formula). Findings revealed a high preferable level of using strategies for increasing students' engagement in Blackboard learning system in the three domains according to the following order: Building a well-designed course, providing assessment and feedback and finally establishing an e-learning community with a sense of belonging. Findings also indicated that there aren't any statistically significant differences in preferring level of using these strategies related to the gender of faculty members.*

**Keywords:** Student Engagement, Blackboard learning system, e-learning, LMS, faculty member.

### INTRODUCTION

Universities have been under increased pressure to adopt e-learning practices for teaching and learning. Due to the greater level of data continuity, reliability, and privacy that Learning Management Systems (LMSs) can provide compared to the available free applications, LMSs are still the central platform for many universities to deliver e-learning. (Zanjani, Edwards, Nykvist, & Geva, 2017)

Blackboard has now expanded into more academic domains as part of a total networked learning environment. It has found a home in distance learning with university and college courses taken totally online, but also as a complement to more traditional instruction in hybrid courses and courses in which other digital environment learning systems may be the primary means of instruction. (Bradford, Porciello, Balkon, & Backus, 2007)

Student engagement is an important issue in higher education because it is correlated with student satisfaction (Kuh, Kinzie, Buckley, Bridges & Hayek, 2011), student success, retention and motivation (Beer, Clark & Jones, 2010), and an indicator of quality (Coates, 2005).

Various strategies were presented to create e-learning experiences. This includes knowing the learners, setting clear e-learning objectives, making the course interactive, organized and visually appealing, stimulating students' curiosity, and providing a meaningful experience. Jeffrey, Milne, Suddaby & Higgins (2012) discussed ten essential engagement strategies that

have particular potency at critical stages of the semester emerged from the literature. This includes getting students engaged by two major types of strategies which are primers for getting students attention, and social presence and belonging.

To engage students in Virtual Learning Environment (VLE), faculty should make an effort to establish a sense of community within the course. Community, in the online sense, was defined by Sarder (2014) as an environment which is enabled through the interaction and collaboration of its members using various technology and mixed media methods. He suggested a number of techniques to foster a sense of community in VLE which include using inclusive language when lecturing, building rapport with students, adopting a positive attitude, being honest, setting online office hours and establishing an online presence. Online community can be enhanced in seven ways: Decreasing learners' transactional space, increasing social presence, providing equal opportunity for involvement, designing small group activities, facilitating group discussions, matching teaching style with the learning stage, and limiting class size. (Rovai, 2002)

Good course design is more critical in VLE than in face-to-face teaching, and it is more difficult to hide poor design or mediocre content. (Mason & Rennie, 2006)

Thoughtful design of learning activities is critical to the attainment of educational outcomes. The design and the way courses are structured can be vital factors that are associated with students' motivation and positive or negative experiences of learning online (Anderson, Liam, Garrison & Archer, 2001). Nash (2005) mentioned in this context that there is a need to improve online learning environment design to increase student motivation and their active engagement in the course.

Assessment is a vital part of the learning process as well as in VLE. Rust, O'Donovan & Price (2005) discussed that assessment is 'the single biggest influence on how students approach their learning', while Race (2009) stated that 'the most important thing we do for our students is assess their work'. Therefore, it can be challenging in VLE, possibly because it is related to learning outcomes, academic policy, level of course, and available assessment resources. McGee & Reis (2012) suggested recommendations for performance assessments such as projects, threaded discussions, and presentations, along with traditional objective assessments such as quizzes, exams and essays.

Feedback plays an important role in learner's learning process. Therefore, providing effective feedback is challenging in VLE due to the physical absence of instructor and the restrictive nature of most available online learning platforms. Gibbs & Simpson (2005) argued that feedback can perform several functions depending on the purpose of assessment. However, online learning presents both challenges and opportunities for assessment. Students favor more structured opportunities to engage in continued online discussions and to receive prompt feedback (Babb, Stewart & Johnson, 2010; Guidera, 2003)

## **LITERATURE REVIEW**

### **Students' Engagement**

Rodgers (2008) argued that in order to improve teaching effectiveness and academic achievement, higher education should consider aiming to develop e-learning teaching strategies that encourage greater engagement and also take into consideration the different learning styles found within the student body Glogowska, Young, Lockyer & Moule (2011) reported that teaching staff engaged in the development of blended learning courses need to

pay particular attention to the ways in which they develop and integrate online and face-to-face materials.

Delialioglu (2012) investigated how blending of different instructional approaches with technology affects students' engagement. Jeffrey et al., (2012) tested well-developed engagement strategies in blended learning environment, compared to a minimal use of strategies online. They summarized ten essential engagement strategies that have particular potency at critical stages of the semester emerged from the literature. They found that teachers influence the nature and quality of student learning through their selection and design of learning experiences and those levels of engagement are strongly influenced by assessment and online activities such as quizzes. They also found that most teachers had well-organized courses with good structures. On the other hand, social presence is largely under-developed in most online environments and the levels of disengagement in the classroom are of concern to teachers.

Zanjani, Edwards, Nykvist & Geva (2016) found that if educators do not sufficiently engage in online activities by answering student questions, monitoring their activities and leading discussions, it is irrational to expect students to be more engaged. Williams & Whiting (2016) discovered relationships between technology use, engagement, and methods that increase student level of engagement. And Zanjani et al., (2017) focused on the important LMS design factors that influence user engagement with e-learning tools within LMSs. The study results showed that participants had problems pertaining to the Blackboard structure, which influenced their effective engagement with its tools.

### **E-Learning Community**

Rovai, Wighting & Liu (2005) as well as Liu, Magjuka, Bonk & Lee (2007) concluded that instructors, who facilitate a sense of community and student engagement, significantly affect student satisfaction and quality of online learning. Ascough (2007) argued that classroom community was positively related to student engagement.

Engstrom, Santo & Yost (2008) and Baker (2010) studies revealed that classroom community and student engagement are closely related to one another. Creating online social communities creates an encouraging environment of shared activities that result in deeper learning, higher final course grades, and successful online courses. (Cho, Gay, Davidson & Ingraffea, 2007), and (Pate, Smaldino, Mayall, & Luetkehans, 2009).

Young & Bruce (2011) examined correlates of both online classroom community and student engagement in online learning, as well as comparing community and engagement across disciplines in higher education. Tayebinik & Puteh (2013) survey revealed that blended learning is more favorable than pure e-learning and offers many advantages for learners like producing a sense of community or belonging. Rovai & Jordan (2004) found that blended courses create a stronger sense of community among learners than either traditional or fully online courses.

The aspect of community, as Gedera, Williams & Wright (2015) argued in their study, was a factor that affected students' motivation and active participation in learning activities. The academic and social interactions enabled the students to have closer connections and a sense of belonging to the learning community where they felt supported and motivated. The lecturer's presence as part of the community that was reflected through the instructional strategies, acknowledgements and feedback also seemed to have an impact on students' motivation and active participation in this online course.

## **Course Design**

Robinson & Hullinger (2008) hold the view that a faculty member should provide courses that promote student engagement, with particular mention of the online learning environment. They also note that when designing a curriculum there should be a focus on increasing interaction with class materials. Jeffrey et al., (2012) argued that teachers influence the nature and quality of student learning through their selection and design of learning experiences, and that levels of engagement are strongly influenced by assessment and online activities such as quizzes. They found that most teachers had well-organized courses with good structures.

Some pedagogical and practical ideas and strategies were suggested by Gedera et al. (2015) concluded that students' motivation and engagement were affected by the tools—Adobe virtual classroom and the LMS that facilitated the design of the course and forum discussions. Designing appropriate tasks and assessment procedures were practices found to be important in relation to lecturer role to engage students more in online activities. (Zanjani et al., 2016)

## **Assessment and Feedback**

McIsaac, Blocher, Mahes & Vrasidas (1999) argued that students' interactions and positive learning experiences could be promoted by the teacher's effort in providing immediate feedback, participating in discussions, encouraging social interactions and using collaborative learning strategies. These efforts by the instructors do seem to motivate students' participation in learning activities in online learning environments (McIntyre & Watson, 2011). Marriott & Lau (2008) argued that the use of online assessments had a positive impact on student motivation and engagement. It has been suggested that a student's engagement throughout their degree is influenced by their first year at university.

Factors that can create engaging learning experiences for the online learners, according to Chakraborty & Muya Nafukho (2014), are creating and maintaining positive learning environment, building learning community, giving consistent feedback in timely manner, and using the right technology to deliver the right content.

Holmes (2018) found that introduction of the assessments led to a significant increase related to the VLE activity compared to the VLE activity in that module the previous year, and also compared to the VLE activity of two other modules studied by the same student cohort.

## **RESEARCH PROBLEM**

The increase in the adoption of LMSs in higher education such as Blackboard has been accompanied by an important demand which is increasing students' engagement in these settings. Students' engagement is seen as a predictor of academic achievement in both face to face and VLE. This study focuses specifically on exploring the preferable strategies used by faculty members for increasing students' engagement in Blackboard learning system and provides further details in this regard. Accordingly, it responds to the following research questions:

- 1- What are the preferable strategies used by faculty members to increase students' engagement in Blackboard learning system according to the following domains:
  - Establishing an e-learning community with a sense of belonging
  - Building a well-designed course
  - Providing e- assessment and feedback

- 2- Are there any statistical significant differences at ( $\alpha \leq 0.05$ ) in preferring level of using these strategies related to faculty members' gender?

## METHODOLOGY

This study adopts the analytical descriptive approach. A three-point Likert Scale (Agree-neutral-disagree) was used after reviewing the literature to answer the study questions. It consists of (37) items distributed on three domains to explore the preferable level of strategies used for increasing students' engagement in Blackboard learning system. Table 1 illustrates the distribution of scale domains and items.

**Table 1. Distribution of Scale Domains and Items**

	<b>Domain</b>	<b>Items</b>
<b>1</b>	Establishing an e-learning community with a sense of belonging	1-12
<b>2</b>	Building a well-designed course	13-25
<b>3</b>	Providing assessment and feedback	26-37

Scale validity was verified by five specialists from Faculty of Education and PYP at Najran University to judge the scale (relevance of items to each domain, lack of items repetition, and the internal structure). All modifications were taken into account and (5) items were omitted out of (42) items. Scale reliability was estimated using Cronbach's alpha reliability coefficient. It revealed a high reliability coefficient with total Cronbach's alpha ( $r = 0.806$ ) as shown in Table 2.

**Table 2. Reliability Statistics**

	<b>Domain</b>	<b>Cronbach's alpha</b>
<b>1</b>	Establishing an e-learning community with a sense of belonging	0.718
<b>2</b>	Building a well-designed course	0.60
<b>3</b>	Providing assessment and feedback	0.582
	<b>Total</b>	<b>0.806</b>

Study population consisted of PYP faculty members in Najran University, KSA during the second semester of the academic year 2017-2018 which numbered (112) faculty members. A simple random sample of (66) faculty members is chosen. Table 3 illustrates sample distribution according to the study variables.

**Table 3. Descriptive Statistics**

<b>Features</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>	Male	33	50%
	Female	33	50%
	<b>Total</b>	<b>66</b>	<b>100%</b>
<b>Department</b>	Basic Science	10	15.2
	English Language Skills	36	54.5%
	Computer Skills	12	18.2%
	Self-Development Skills	8	12.1%
	<b>Total</b>	<b>66</b>	<b>100%</b>

## RESULTS

### Question 1

To answer the first question, “What are the preferable strategies used by faculty members to increase students’ engagement in Blackboard learning system according to the following domains: Establishing an e- learning community with a sense of belonging, building a well-designed course, and providing assessment and feedback?”, means and standard deviations of sample responses for each domain were computed. Results were explained according to the following means: (1-1.66 weak, 1.67 – 2.33 average, and 2.34 – 3 high preference level). Table 4 illustrates the results.

**Table 4. Means and Standard Deviations of Sample Responses**

No.	Domain	Mean	SD	Preference Level	Rank
2	Building a well-designed course	2.76	0.207	High	1
3	Providing assessment and feedback	2.70	0.237	High	2
1	Establishing an e-learning community with a sense of belonging	2.66	0.275	High	3
<b>Total</b>		<b>2.708</b>	<b>0.191</b>	<b>High</b>	

Table 4 shows that the means of the three domains were between (2.66 – 2.76) with a total high preference level. Domain two “Building a well-designed course” ranked first as (M=2.76, SD=0.207), then domain three “Providing assessment and feedback” as (M=2.70, SD=0.237), and finally domain one “Establishing an e-Learning community with a sense of belonging” as (M=2.66, SD=0.275). Means, standard deviations and rank of the sample responses of each item in these three domains were computed. According to the responses means, results show no average, or weak preference levels.

### Question 2

To answer the second question, “Are there any statistical significant differences at ( $\alpha \leq 0.05$ ) in preferring level of using these strategies related to faculty members’ gender”, Means, standard deviations, and t-test formula are commuted. Table 5 illustrates that there aren’t any statistically significant differences in preferring level of using these strategies related to faculty members’ gender.

**Table 5. T-test for Equality of Means Related to Gender**

No.	Domain	Male		Female		T Value	df	Sig. (2-tailed)
		Mean	Std. Deviation	Mean	Std. Deviation			
1	Establishing an e-learning community with a sense of belonging	2.63	0.292	2.69	0.258	-.856-	64	0.395
						-.856-	63.002	0.395
2	Building a well-designed course	2.73	0.168	2.79	0.24	-1.099-	64	0.276
						-1.099-	57.29	0.277
3	Providing assessment and feedback	2.69	0.281	2.71	0.188	-.344-	64	0.732
						-.344-	55.81	0.732

## **CONCLUSION**

This study has revealed some pertinent results. Faculty members showed high preference level of using strategies which increase students' engagement in Blackboard learning system according to the following order: Building a well-designed course strategies, providing assessment and feedback, and establishing an e-learning community with a sense of belonging strategies. This can be explained because faculty members have seen that utilizing these strategies increase students' engagement and that engaging students within e-learning setting such as the Blackboard learning system is not difficult.

Faculty members' highly preferred the strategies of building a well-designed course to increase students' engagement in Blackboard learning system. These strategies included offering the course content, engaging students in well-designed discussions and assignments, uploading course objectives and assessment strategies, notifying students with the course outline, including (URLs, images, videos, graphics and audios) pertinent to the course.

Results revealed that faculty members' second preference is using the strategies of establishing a sense of community to increase engagement in Blackboard learning system. These strategies included responding to students' queries within the stipulated time, posting office location and office hours, encouraging students to engage in discussion forums, being present in discussion forums, welcoming students at the beginning of the course, supporting students within mutual trust, and using students' names.

Results also revealed that faculty members' thirdly highly prefer using most of the scale strategies to provide assessment and feedback to increase students' engagement in the Blackboard learning system and these strategies included announcing exam schedules, providing immediate feedback, announcing grading policy (weight of assignments, quizzes, etc.), and announcing deadlines of e-assignments and projects.

No significant statistical differences were noted in preferring level of using these strategies related to gender. This can be explained as all faculty members (male and female) in PYP are aware of the importance of these strategies to increase students' engagement in Blackboard learning system because they actually had good experience in dealing with these strategies to increase students' engagement, as they are using the Blackboard learning system for almost seven years. Moreover, Najran University encourages and qualifies faculty members to meet the development of e-learning methods and promotes e-learning culture. This makes faculty members aware of their role to encourage students to engage in the Blackboard learning system.

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