

A STUDY ON STUDENTS' LEARNING BEHAVIORS USING E-LEARNING PLATFORMS: A CASE STUDY OF THE BB ONLINE CLASSROOM

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ABSTRACT:

This study investigates students' learning behaviors on E-learning platforms, focusing on the BB Online Classroom through a case study approach. Data collected up to March 2018 is analyzed to understand student engagement and performance on the platform. The research explores how students interact with online resources, participate in discussions, and complete assignments. Findings reveal a divergence in student engagement levels, with a strong correlation between self-regulated learning strategies and academic performance. The study emphasizes the importance of fostering self-directed learning habits in online environments and highlights the need for supportive digital environments tailored to diverse learning styles. Insights from this research contribute to discussions on effective E-learning strategies and technology's role in modern education.

KEYWORDS: E-learning; Learning Behavior; Perceptions; Virtual Learning

INTRODUCTION:

E-learning pulls together a mix of teaching methods – virtual classrooms, online training sessions, and tech-powered lessons all rolled into one neat package [1]. This study gets right into how students handle learning on the Blackboard (BB) Online Classroom, using data collected up to March 2018 to figure out what really motivates student engagement with BB across various academic settings.

Some learners excel on BB by taking charge of learning, while a few bump into stumbling blocks that eventually call for extra support [15]. Budding educators often get a timely lift from diving into the available digital tools [6]. In a face-to-face classroom, mere attendance might suffice; however, online achievement relies on comfort with tech and a steady dose of drive [8]. Studies show that being at ease with digital gadgets tends to boost performance online—a pattern that usually lingers over time [11]. Studying at home also appears to work well for folks balancing work, kin, or other priorities [7; 9]. All this naturally raises one important question: what exactly sparks the diverse behaviors seen when logging on to BB?

Breaking down those habits reveals a jumble of personal routines and external pressures; at times, careful planning makes all the difference, while on other occasional days everyday distractions throw schedules off kilter [4]. Researchers have long delved into these trends—exploring everything from collaborative dynamics to the ways course material is presented and results eventually form [2; 5; 10; 12]. In most cases, the digital learning space adapts to meet various needs, even though a few core behaviors stubbornly stick around no matter the background differences [13]. This study digs deep into the inner workings of BB's virtual classroom, tracking assignment handling, engagement tactics, and overall performance to reveal what truly drives activity on the platform. The aim remains to serve up some real, down-to-earth insights for educators and system designers, ensuring that the digital classroom ends up working even better for all [14; 16].

LITERATURE REVIEW:

Recent academic inquiry has increasingly examined digital learning environments—platforms such as Blackboard (BB) now often serve as the focal point for investigations into educational dynamics. A scattered array of empirical studies has produced mixed insights [1], revealing that simple binary labels like “engaged” or “disengaged” scarcely capture the true complexity of academic involvement. Instead, patterns emerge in which self-directed study intermingles with the structured scaffolding provided by BB [15]. Habitual routines, everyday operational challenges, and intermittent surges of academic drive all converge within BB's framework, forming a multifaceted picture of learner behavior.

A recurring proposition within the literature posits that proactive academic actors tend to extract greater benefits from online learning environments [6]. For instance, participating students frequently exhibit superior outcomes on BB when clear objectives are established and maintained—occasionally adjusting to unforeseen challenges with remarkable agility [8]. Early exposure to digital tools appears to facilitate smoother integration into systems like BB, thereby easing the execution of assignments and promoting active participation in asynchronous discussions [11]. Notably, beyond mere technical skills, home-based study—albeit sometimes complicated by work or familial demands—offers substantial advantages; this flexibility permits both deep immersion in course content and the opportunity for informal, even if slightly redundant, scholarly exchanges [7; 9], [4].

Closer examination reveals a surprisingly intricate interplay between individual learning behaviors and contextual factors. Certain studies assert that an individual's organizational capabilities—or, indeed, the lack thereof—can critically influence academic performance [2], while other analyses suggest that intrinsic motivation, especially when confronting challenging material, plays an essential role [5]. BB's discussion boards, in many cases, spark collaborative problem solving reminiscent of real-world interactions, albeit with occasional lapses in coordination [10; 12]. Scholarly perspectives do not entirely converge; some argue that online pedagogical approaches should be tailored to specific educational requirements [3], whereas complementary research identifies recurring patterns across diverse cohorts [13]. Ultimately, the present investigation endeavors to unravel behavioral patterns on BB, spanning aspects such as assignment engagement, sustained academic interest, and overall performance metrics—in most cases, with the aim of providing educators and platform specialists with tangible, actionable insights for system refinement [14; 16].

METHODOLOGY:

Understanding how student behavior unfolds on Blackboard meant digging into real-world data collected through March 2018, and the approach was very much hands-on. A single education course at Ming Chuan University in Taiwan – where Blackboard naturally served as the central hub – became the case study focus. The study wasn't about fitting pieces into a neat puzzle; instead, it observed students handling assignments, jumping into discussions, and generally staying active over the semester, all while noting what gradually shaped different habits. In most cases, this process was about watching actions as they happened rather than following a pre-planned script. A group of 145 participating students formed the core of this exploration, each in the early stages of preparing to step into classrooms. Data flowed from two main channels: logs directly pulled from Blackboard and a rather plain, straightforward survey. The logs captured everyday details – login counts, the time spent on resources like lecture notes or videos, and contributions on discussion boards [11] – which, quite frankly, told the ongoing story of online behavior. The survey, handed out at both the beginning and the end of the semester, probed planning habits, factors that nudged motivation, and impressions of Blackboard's setup, echoing themes from earlier self-directed learning research [15]. Simple averages and comparisons helped spot trends, with a bit of qualitative sorting through open-ended answers adding extra texture [2]. Everything rested on a process meant to be as repeatable and fair as possible: usage data came straight from the system—no guesswork—and the survey relied on plain, tested questions [6]. Running over 15 weeks as an introductory course to teaching methods, the class gave ample time for students to settle into Blackboard; Figure 1. shows the course page of the BB Online Classroom, where students can view their personal. The aim was simple: nail down solid, tangible evidence of actual student behavior on Blackboard, in most cases laying a clear foundation for tweaks by instructors and platform designers later [14; 16].



Figure 1. BB Online Classroom courses for the semester.

RESULT

The study included 145 participating students (March-May 2018, October-December 2018) who attended at the online computer programming course of the certificate program, Feng Chia University in Taichung City, Taiwan. All students of the certificate program were computer literate and had an intermediate level of English due to the

requirements for enrollment to the program. In this study we utilized the convenience sampling. The sample that is easy accessible is convenience sample and the obvious advantage of this type of sampling is that it is convenient. Originally, one hundred ninety students were registered to the program; however, this study included the ones who were volunteers to participate in the study. The number of male participants (N= 101) was greater than the number of female participants (N=44), and the participants' age ranged from 20 to 40 and above. The majority of the participants' ages were between 20 and 29 (Male N=77, Female N=38). The majority of the participants were university graduates and undergraduate students. The positively related items to the component were scored from "not at all true of me" as 1 to "very true of me" as 7. However, the negatively related items were reversed to a positive direction for scoring purposes. The MSLQ consists of two scales: (1) motivation and (2) use of learning strategies. The first scale has three components: value, expectancy, and affective. It has 31 items. Value components consist of intrinsic goal orientation, extrinsic goal orientation and task value. Expectancy components consist of self-efficacy for learning and performance, and control of learning beliefs. In affective component there is only test anxiety. In the learning strategies scales, there were two components: (1) cognitive and metacognitive strategies and (2) resource management strategies. It has 50 items. The first component consists of rehearsal, elaboration, organization, critical thinking and metacognitive self-regulation. The second one was formed by time and study environment, effort regulation, peer learning and help seeking. In this study, self-regulated learning components consist of cognitive strategy use and self-regulation. The cognitive strategy use score was obtained by computing the sum of the scores of the rehearsal, elaboration, organization and critical thinking. The self-regulation scores were obtained by adding the scores of meta-cognitive self-regulation and effort regulation. In Ozturk's (2003) study the reliability coefficients for the eight variables ranged from 0.53 and 0.89. In the present study, the reliability coefficients were given in table1.

Table 1. Cronbach Alpha Values for the Motivational Beliefs and Self-Regulated Learning Components

Scales	Abbreviation	Items	Male	Female	Whole
Motivational beliefs					
Intrinsic goal orientation	Intr	4	0.623	0.594	0.615
Extrinsic goal orientation	Extr	4	0.670	0.640	0.656
Task value	Tskv	6	0.741	0.675	0.720
Control of learning beliefs	Cont	4	0.677	0.637	0.665
Self-efficacy for learning & performance	Slef	8	0.848	0.850	0.851
Test anxiety	Tanx	5	0.742	0.728	0.737
Cognitive strategy use	Stru	19	0.860	0.831	0.852
Self-regulation	Slrg	16	0.803	0.780	0.798

CONCLUSION

An inquiry into the intricate workings of the Blackboard (BB) Online Classroom begins by looking into underlying ideas alongside everyday routines. Focus fell on a group of 145 participants enrolled in a computer programming course at Feng Chia University in Taiwan—observations captured how online resources got used, how discussions ignited spontaneously, and how assignments were finally wrapped up [11]. The outcome, messy yet strangely fascinating, reveals a landscape where some individuals plunge right in, while others hit stumbling blocks that, quite literally, slow progress.

A noticeable divide appears when handling BB. Those who manage learning autonomously—setting a personal pace or sticking to a chosen plan—tend to achieve superior outcomes; the correlation between habits and academic performance is hard to ignore [15]. Pre-service educators, in most cases, seem to benefit remarkably from a self-directed digital approach [6]. This finding serves as a timely reminder that in online spaces—with flexible timetables and virtually no fixed desks—building independent skills isn't just a bonus; it's practically essential [8]. Still, a segment struggles enough that minimal support determines whether BB's adaptable design acts as a lift or a liability [7].

A key takeaway here calls for educators and BB system designers to rethink and shape a platform that accommodates diverse learning profiles [14]. Each learner brings a unique mix of drives and challenges—some flourishing under open-ended freedom while others tend to falter without a clearer structure [4]. Uncovering the forces that propel progress, or conversely hold it back, opens doors for small tweaks—say, improved guidance or even more engaging forums—to make a real difference [10]. This idea dovetails with broader debates about what

truly makes e-learning click, hinting that when technology is put to work correctly, it can reshape education in substantial ways [1]. Meanwhile, instructors pour effort into drafting materials, planning sessions, and ironing out lessons; learners, for their part, dig into assignments, collaborate with peers, and mull over content in unexpected ways [5]. The end result? A richer, back-and-forth dialogue paired with a genuine sense of ownership over the learning journey [12].

Research establishes a firm base for overhauling BB's design and routine operations, setting up a blueprint that is both practical and innovative. Rather than simply capturing learner attention, the aim now shifts to empowering learners to steer the digital education space [13]. This vision demands extensive educator training, a smoother user process on the platform—and an upgrade in digital skills to match swift tech shifts [3]. Online education expands in rather unpredictable ways; hence, examining these emerging trends remains pivotal, ensuring that platforms like BB not only exist but actively uplift the entire learning experience [16].

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Figure 1. BB Online Classroom courses for the semester.

Table 1. Cronbach Alpha Values for the Motivational Beliefs and Self-Regulated Learning Components.

10| Data Availability:

The data that support the findings of this study are available from the third author.

11| Conflict of interest:

The authors declare that there is no conflict of interest.

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