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Factors Affecting Student's Performance and Intention to Use Hybrid Mode Learning

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ABSTRACT

The central question in this paper is: "How to be more effective and efficient in H-mode Learning." Specifically, this paper proposes that various designs (Student's location, software, and contents at students' screens) in H-mode Learning will affect the students' perceived resource availability, interaction and attention, which then impact students' academic performance and their intention to use H-mode.

The research is in progress. The Memorial University of Newfoundland has currently adapted the H-mode Learning for the fall semester, September 2021. We intend to collect data from our university and plan to observe and analyze it.

Researching on H-mode would give the students and the universities a better alternative to focus on and could help better the course structure and student academic outcomes. The research would pave its way for researchers in MIS to learn and explore more about the evolving method of learning.

Keywords

H-mode learning, hybrid mode learning, blended Learning, pandemic.

INTRODUCTION

The IGI Global defines Traditional Learning as typical face-to-face interactions that occur in a physical location. Since time known, traditional Learning has been the primary form of learning and teaching. Students and teachers are physically present in a classroom environment where they learn, discuss and work together.

But as science developed, so did the field of education. A new model of instruction called "Distance Learning" emerged.

In the past few years, right after the pandemic strikes, a new mode of learning has emerged, namely, "Hybrid or H-mode Learning."

H-mode or the Hybrid mode learning is defined as a learning mode a teaching mode that consists of some in-classroom students and other online students during the same class time. This is a new model of Learning which includes in-person training and also e-learning. Some

students would be present in the class, and the rest would attend online. There would be a rotation among the students such that every Student experiences both online and in-classroom learning within the same course. The course structure is designed so that various materials are available online and can be understood and completed by both categories of students.

H-mode differs from traditional Learning in various ways. First, it's a mixed model where both online students and face-to-face students are present. Second, the course materials are a combination of both online and traditional resources. Third, it works on a rotational basis so that all the students will experience both face-to-face and online learning in a classroom. This new model poses enormous challenges for students and instructors simultaneously, considering the adaptation of the new model by students and instructors' development of learning materials.

RESEARCH MODEL 1
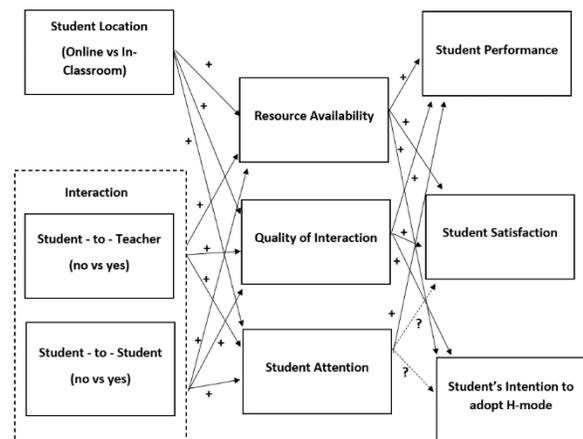
RESEARCH MODEL 2
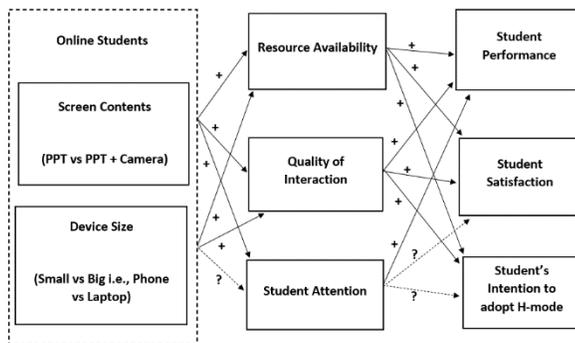
Resource Availability

Resource availability explains the various study materials and resources available to students. Teachers try to ensure that both in-class and at-home students have equal opportunities for hybrid mode learning.

Bolaji (2002) suggested that resource management resources and students' performance go hand in hand. His research concluded that poor resource management led to weak student performance.

Fasasi (2012) observed that material resources available in schools play an essential role in quality education.

With the help of previous research, Resource availability is defined as resources available to enhance students' learning outcomes. According to Adeogun and Osifila (2008), physical resources include laboratories, libraries, classrooms, and a host of other physical infrastructure, while material resources include: textbooks, charts, and maps. We will refer to both types of resources as just resources in this paper.

Attention

Observing is a crucial factor in an active classroom experience. Even with so many distractions and interference, teachers and students make sense of the situation and generally continue to instruct, learn, and achieve a degree of success. Piontkowski D., Calfee R. (1979) define this fundamental construct as "Attention."

Recent research has shown that attention is a primary factor affecting student performance and satisfaction (continued use of H-mode learning).

Interaction:

This construct explains the communication and knowledge interchange between instructor and students. An example of interaction would be clearing doubts during lectures.

Interaction could highly affect the way students feel about the classes.

A key assumption is that learning is influenced by how an individual participates in educationally purposeful activities (e.g. Carini et al. 2006; Nygaard 2013). By this we mean, amongst other things, the time spent actively cognitively engaged with the subject matter (Trowler, 2010; Trowler and Trowler, 2010).

Ni, A. Y. (2013), compare the effectiveness of classroom and online learning. This study indicated that although student performance is independent of the mode of instruction, specific courses were more challenging to students who persisted in the virtual environment than in the classroom. Furthermore, participants were less intimidating, and the quality and quantity of interaction may be increased in online classes. Online interaction can be used to enhance learning, especially for students who tend to be reserved in the classroom setting.

H-mode Location

A student's location is defined as the place from which the Student is attending the classes. In a hybrid mode of Learning, the two different locations are At-Home and In-Class.

At-Home students attend classes online via zoom, D2L, or other video applications from their home. In-Class students follow traditional classroom learning where they attend lectures from classrooms.

Many research has focused on Online Learning and Traditional Learning. The results have shown that a combination of both will be more helpful for students to achieve their target. Hannay, M., & Newvine, T. (2006) has introduced the concept of a "hybrid" learning curriculum, 50% online and 50% traditional classroom.

Device Used by Students at Home

With the advancement in technologies, there have been many inventions and device upgrades. One such upgrade is the type of devices. Students have access to various size devices ranging from tablets to PC to compact smartphones. The two primary devices that a student uses to attend online classes are cell phones and laptops.

Today, both cell phones and laptops are designed to provide maximum usefulness to users. The significant difference between them is the screen size. Cellphones have a comparatively smaller screen size than PCs and laptops. This would significantly affect the contents the students view from home. A student learning with the help of a computer can view the entire screen with better pixel qualities than a student using cell phones. And with better picture quality and a more prominent screen, students tend to have more attention and less stress-free viewing.

Performance

Student performance is an important metric that helps us to compare between the in-class students and at-home students. Most of the research in this area has focused on measuring students' performance using quantitative and qualitative measures.

Student's intention to use H-mode

The primary motive behind any research is to determine if the study group would continue using their technology. Our paper focuses on Student's intention to continue using the Hybrid mode of learning even after the pandemic

When students are provided with more resources for Learning, they tend to do their best with what's given to them. Students can perform well in their exams/tests with adequate resources, eventually leading to better performance.

Because of this result, the resources provided to the students will impact their decision to continue the learning mode.

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REFERENCES

1. Li, Z., Tsai, M. H., Tao, J., & Lorentz, C. (2014). Switching to blended Learning: The impact on students' academic performance. Journal of Nursing Education and Practice, 4(3), 245.

2. Ni, A. Y. (2013). Comparing the effectiveness of classroom and online Learning: Teaching research methods. Journal of Public Affairs Education, 19(2), 199-215.

3. Hannay, M., & Newvine, T. (2006). Perceptions of distance learning: A comparison of online and traditional Learning. Journal of online Learning and teaching, 2(1), 1-11.

4. Nazarenko, A. L. (2015). Blended Learning vs. traditional Learning: What works? (a case study research). Procedia-Social and Behavioral Sciences, 200, 77-82.

5. Khorrami, P., Le, V., Hart, J. C., & Huang, T. S. (2014, July). A system for monitoring the engagement of remote online students using eye gaze estimation. In 2014 IEEE International Conference on Multimedia and Expo Workshops (ICMEW) (pp. 1-6). IEEE.

6. Furió, D., Juan, M. C., Seguí, I., & Vivó, R. (2015). Mobile learning vs. traditional classroom lessons: a comparative study. Journal of Computer Assisted Learning, 31(3), 189-201.

7. Chen, C. C., & Jones, K. T. (2007). Blended Learning vs. traditional classroom settings: Assessing effectiveness and student perceptions in an MBA accounting course. Journal of educators online, 4(1), n1.

8. Zhang, D., Zhao, J. L., Zhou, L., & Nunamaker Jr, J. F. (2004). Can e-learning replace classroom learning?. Communications of the ACM, 47(5), 75-79.

9. Boelens, R., Voet, M., & De Wever, B. (2018). The design of blended Learning in response to student diversity in higher education: Instructors' views and use of differentiated instruction in blended Learning. Computers & Education, 120, 197-212.

10. Nayar, B., & Koul, S. (2020). Blended Learning in higher education: a transition to experiential classrooms. International Journal of Educational Management.

11. Hurlbut, A. R. (2018). Online vs. traditional Learning in teacher education: a comparison of student progress. American Journal of Distance Education, 32(4), 248-266.

12. Kemp, N., & Grieve, R. (2014). Face-to-face or face-to-screen? Undergraduates' opinions and test performance in classroom vs. online Learning. Frontiers in psychology, 5, 1278.

13. Lee, J., & Choi, H. (2019). Rethinking the flipped Learning pre-class: Its influence on the success of flipped Learning and related factors. British Journal of Educational Technology, 50(2), 934-945.

14. Emerson, L., & MacKay, B. (2011). A comparison between paper-based and online Learning in higher education. British Journal of Educational Technology, 42(5), 727-735.

15. Dziuban, C., Graham, C. R., Moskal, P. D., Norberg, A., & Sicilia, N. (2018). Blended Learning: the new normal and emerging technologies. International journal of educational technology in Higher education, 15(1), 1-16.

16. Utami, I. S. (2018). The effect of blended learning model on senior high school students' achievement. In SHS Web of Conferences (Vol. 42, p. 00027). EDP Sciences.

Thompson, S. (2021). Old Meets New: Bringing Ancient Studies to Life in the Hybrid Classroom. Journal of Religious Competition in Antiquity, 2(1), 5.