

ONLINE COURSES: INTERACTION TYPES AND EFFECTS

Gulbakhor Tursunboyeva

Uzbekistan State World Languages University

E-mail: gulbahorislomovna@gmail.com

Abstract: Online interaction and technology acceptance are required in online learning. Learner-content interaction, learner-instructor interaction, and learner-learner interaction are types of online interaction. Technology acceptance is described by the two factors of technology acceptance model (TAM). The two factors are perceived usefulness and perceived ease of use. Therefore, this thesis aims to examine the effect of online interaction types.

Key words: *online interaction, technology acceptance, online learning, communication platform, student satisfaction*

Introduction

Online interaction is technology-based communication or event that involves an interrelationship between two or more objects or individuals connected with a technology. Online interaction is based on the independent learning and teaching theory as an education system where instructors and learners are separated in a different space and time. Students tend to learn independently. A communication method becomes important in online interaction. Distance learning must have more than one media to communicate and provide course materials, such as books, social media, television, radio, computer, telephone, and applications used for learning. There are three types of online interaction. The first type, learner-content interaction, is an interaction between learners and the course materials. By interacting with the materials, students gain knowledge and it becomes a process of receiving information to their cognitive thoughts. Some learning processes are only content-interactive, thus, making the communication only one-way with an expert. This interaction is commonly implemented in independent learning. In this case, the learning process includes providing videos presenting the materials, learning from various sources, reading the materials, using study guides, watching videos, and finishing a project or assignment.

The second type is learner-instructor interaction, which is an interaction between learners and the instructor who provides the course materials. The instructor can receive questions, give advice, support, and motivation to each learner. For that reason, a feedback is needed between learners and the instructor. This interaction can be performed using a communication platform. Learner-instructor interaction can be done synchronously through a phone or video call. On the other hand, distance learning can be done asynchronously through e-mail, messaging applications, or discussion forums.

The third type, learner-learner interaction, is an interaction between a learner with another learner, individually or in a group, with or without an instructor. Usually, learner-learner interaction is found in a group discussion. Learner-learner interaction can be done through emails or chatting features provided by communication platforms.

As online learning opportunities have expanded at a rapid rate over the last two decades in community colleges, researchers have developed many theoretical frameworks to determine the relationship between the online learning environment and learners' ability to be successful in that environment.

A broad view of theories indicates that the factors to be considered in successful online learning are large in number and complex in nature. Khan developed a framework for e-learning that

included learning issues in eight categories, including interface design, evaluation, management, institutional, pedagogical, technological, ethical, and resource support factors.

Gilroy, taking a constructivist stance, stated that learning is both experiential and social, and it is the context of learning- wrapping each learner's experience around the content-that is most critical. Gilroy's theoretical construct is that low success rates occur because of learner dissatisfaction, and the cause of the problem is the separation of people in time and space. Corbeil developed a framework with a strong individual learner focus, arguing that there is a relationship between student success and the online technologies' self-efficacy, internal locus of control, and self-directed learning readiness.

When fine-tuning the focus to explore the issue of interaction in online learning and the relationship to the successful course completion, three primary theories have a major role: the schools of learning behaviorism, cognitivism and constructivism, Moore's theory of transactional distance and Tinto's theory of persistence.

Each of the primary schools of learning has contributed to instructional design strategies for online learning, and each has a place in the development of effective means of interaction. A behaviorist approach to learning views the mind as a 'blank canvas' focusing only on behaviors that can be observed, quantified, and measured without regard to the effect of the mental processes.

In order to create viable online learning programs, student-student interactivity has been identified as an essential element. Online learning communities may only be successful if such a form of interaction is promoted at all costs. Although this has been the general view held by most practitioners, critics of student-student interaction as a paramount component in online course offerings have a conflicting opinion.

It is, however, known that effective online communities may only be enhanced in environments where interaction has been strengthened. Moreover, the design of online course programs should be such that student-student interaction is given a priority as part of the objectives to be met in the course of learning. Perhaps, the most practical way to comprehend this would be draw parallels between online learning and classroom environment where face-to-face teaching and learning take place. Looking at each individual type of interaction in greater detail illuminates why each is a key and critical component of course design and can have such an impact on persistence in the course.

Student-instructor interaction provides the opportunity for information and learning to be exchanged in two way communication between both parties. Instructors exhibit multiple personalities throughout a course; at once, nurturing, motivating, constructively criticizing, and cajoling. Providing frequent feedback gives students the opportunity to evaluate their learning and construct new knowledge from the feedback. Instructors can interact with students either individually or in groups depending on the available tools of the learning management system but must be more than just a facilitator. Student-student interaction tends to be the focus of much research on persistence and successful completion in part due to the significant varieties of interaction that can take place.

Formal interactions, in the form of collaborative learning, group projects, or graded discussion, provide a mechanism for the exchange of knowledge, formed an opinion, and cognitive connection. Informal interaction in the form of social, non-graded information sharing serves to build a community of learners, and the frequency of interaction among peers can lessen the sense of isolation or loneliness felt by a student.

In student-content interaction, both the learning content and the method of delivery are considered. There is anecdotal evidence that students in online courses benefit from frequent interaction with both the learning content assignments, discussion board postings, assessments and the plethora of tools available in current versions of learning management systems including wikis, whiteboards, podcasts, chats, audio-visual tools

In addition to the frequency of interaction in the three categories of interaction (I-S, S-S, and S-C), it is also necessary to analyze the characteristics of the different dimensions of interactions. A variety of analytical models have been developed that examine the content of information acquired in interaction.

Song assimilates the different models into a single framework of five primary dimensions of learning, including social, procedural, expository, explanatory, and cognitive. The social dimension is casual, informal interaction; procedural interaction is between instructor and learner that include factual information regarding course process and policy.

Expository interaction includes answers to questions, and explanatory interaction is the instructor's response to student queries. Cognitive interaction involves higher-order thinking, usually in the form of extended discussion. The categorization of interaction using this analytical framework adds an additional element of knowledge to be factored into research on the type of interactions leading to successful course completion. The debate among scholars and researchers is far from complete, but there is ample indication that both the frequency and type of individual and group interaction is critical to the success of online learning.

Conclusion

Interaction is a fundamental component of online learning that significantly impacts student engagement, satisfaction, and overall success. This research has highlighted three primary types of interaction: learner-content, learner-instructor, and learner-learner. Learner-content interaction allows students to engage actively with course materials, facilitating knowledge acquisition and cognitive development through independent study. Learner-instructor interaction creates a two-way communication channel where students can seek guidance, receive feedback, and stay motivated throughout the course. Learner-learner interaction, both formal and informal, encourages collaboration, discussion, and peer support, which helps reduce isolation and builds a sense of community within online learning environments.

The effectiveness of online courses depends not only on the frequency of these interactions but also on their quality and purpose. Analytical frameworks that consider social, procedural, expository, explanatory, and cognitive dimensions further demonstrate the complexity of designing meaningful online learning experiences. Educators should carefully plan course activities to promote balanced and engaging interaction across all three types, using a variety of communication tools and platforms. By fostering purposeful and well-structured interactions, online learning programs can enhance student learning, improve persistence and course completion rates, and ensure that digital education remains effective, inclusive, and engaging.

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