

# Evaluating the Effectiveness of Message Design in Accelerated Online Programs Using a Think Aloud Protocol

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## Abstract

This study reviews the potential implications associated with message design, timing, and delivery on students in an Accelerated Online Program. Attention to participant verbal and physical reactions will be analyzed utilizing a non-positivistic Think Aloud Protocol on a select sample. The aspects of the study will enable researchers to obtain data related to individual reflections.

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## 1 Introduction

Message Design is an intentional effort to create a message for an intended purpose directed to an intended audience. According to Niedle, Ross & Millan (2013), "Message Design is significant communication, often sent to a recipient who cannot be contacted directly" (p. 5). In information technology education, course authors, educators, and program coordinators utilize message design to communicate with students. Many considerations go into creating messages.

As learning environments become more complex, instructional message design becomes more significant. For example, clarity of the design is found to be one of the factors that impact students' satisfaction and perceived learning in asynchronous online courses (Swan, 2001), which mirrors the advising activities associated with an accelerated online program. Clarity of design promotes student interaction, which leads to higher levels of reported activity and satisfaction with a program of study. This proposed research seeks to understand how messages impact students' experiences with an ultimate goal of using the knowledge gained to enhance the message design process in an advising setting with accelerated online students.

## 2 Purpose of the Proposed Study

The purpose of this study is to evaluate a series of five to eight scripted messages designed for students in an accelerated online program (AOP) at a university located in the south central region of the United States of America. The messages under investigation are part of advising and are generally separated from the normal discourse that occurs between students and an instructor. The study aims to determine the effectiveness of the message design in an AOP setting by 1) Considering whether or not the selected messages were perceived as intended, 2) Reviewing the timeliness of the messages, and 3) Examining the order or sequence of the messages.

## 3 Review of Literature

### 3.1 Think Aloud Protocol

A Think Aloud Protocol is used as part of an empirical process to elicit data regarding cognitive processes in a person's working memory. A Think Aloud Protocol, which is similar to Classical Introspection, focuses on student analysis of personal thoughts and mental processes when completing a task. Ericsson & Simon (1993) found that using appropriate and clear instructions allows the think aloud process to preserve the thought processes of the participants. This approach has evolved into a structured, rigorous method of collecting data and feedback on cognitive processes.

This method obtains participant data through the verbalization of cognitive processes. One important consideration when employing this method is that the researcher be sensitive to the possibility of overloading the participants' working memory during the study. Cognitive overload can be avoided by chunking related pieces of information within messages. This allows for synchronization of verbalization and the thinking process.

### 3.2 Accelerated Online Learning

According to Wlodkowski (2003), accelerated online degrees may be shorter when compared with those of traditional degree programs. Accelerated degree programs are typically comprised of courses either delivered in a shortened time frame or arranged in such a way that the entire degree can be completed in a compressed period of time. As a result, AOP students typically complete coursework in intensive, compressed segments in an effort to complete their degrees faster. The AOP of interest combines course formats (8- and 16-week sessions) to deliver course content; course format depends upon instructional outcomes. Theory courses are taught in an 8-week format while application courses are taught in a 16-week format. The degree offering falls under the accelerated heading since the optimal organization of courses shortens time to degree completion from 36 months to 14 to 18 months.

The researchers conducting this study identified a gap in published literature focusing on the impact of message design in accelerated online programs (AOP). The existing AOP literature includes research-based articles related to AOP and how communication within those programs impacts student stress or anxiety. One possible correlation between student anxiety and participation in an AOP is communication within the course. The areas of communication where anxiety occurs are in student-to-student and instructor-to-student discourses. "The instructor's role and responsibilities in an online course involve carefully designed, primarily written communications with the learners" (Shea, Li, & Pickett, 2006, p. 73) Clear instructor-to-student communication is imperative in an AOP course (Wlodkowski, 2003).

The same concepts can be applied to communications between advisors and students. Clear advisor-to-student communication is important in an AOP because of the shortened time to degree completion. Learners need to have information delivered at key times, in ways that minimize anxiety. Learners should have the opportunity to process course content information that is delivered via written or verbal discourse in order to allow new knowledge to be retained and scaffold with existing knowledge on the subject (Brown & Duguid, 2003) and this will be referred to in this research study as *message design*.

## 4 Method

Students will be interviewed by the message designer using a Think Aloud Protocol to gain a better understanding of their experiences with the scripted messages. The participants will be recorded. Researchers will utilize a traditional qualitative analysis process, which will include the evaluation of transcripts to develop codes independently by three or more analysts. The codes will be compared and a set will be developed, eliminating duplicates. Those codes will be classified into larger categories by the group of analysts, and the primary investigator will use those to develop themes that will be reviewed and approved by the group. The themes will help explain and provide specific examples that illustrate the findings.

### 4.1 Sample

In keeping with qualitative research best practices, five or more students previously or currently enrolled in the program of interest will be recruited to participate in the study. A purposeful sample from the larger population will be selected to represent a cross-section of students from the program. Members of the population of interest are typically non-traditional students between the ages of 30 and 65; many of these students have been members of the workforce for a number of years prior to enrolling in this program to obtain a formal master's education to support their career advancement. An enrolled student in this program typically completes 6-9 graduate hours each semester while juggling the demands of part- or full-time employment as well as family obligations; some students' progress through the curriculum at either a slightly faster or a slightly slower pace. Students in this population frequently exhibit strong organization and planning skills, a high need for responsiveness in all program-related communications, and a desire for direct, clear messages to address specific problems or needs.

### 4.2 Procedure

Interviews will be conducted in a face-to-face setting at a public university located in the south central region of the United States of America. Interviews lasting approximately 30 minutes will be recorded using a laptop camera so as to be as minimally invasive as possible.

Data will be collected using the Think Aloud Protocol to capture the reflective responses and body language expressed by participants. A semi-structured interview with each participant will follow each reflective process. During the interview, the researcher will ask participants questions based on reactions and utterances observed during the think aloud session. This interview is aimed at gaining in-depth understanding and clarification related to participants' initial responses. Sessions will be recorded for coding and analysis by all researchers to allow for development of inter-subjective agreement through

shared reviews after independent coding. This process will be repeated for all. After recording the interview, researchers will complete the first code cycle by coding each interview individually. Then the researchers will meet as a group to review and analyze codes to reach consensus.

Any information provided and/or identifying information obtained will remain confidential and be stored in a password-protected computer file on the university secure server for a minimum of three years following the conclusion of the study. The computer and server are both located behind the university network firewall. All data collected will be coded with a number or pseudonym. The results of this research project may be made public and information quoted in professional journals and meetings, but information from this study will protect the identity of study participants.

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