

Using Explanatory Data Collection Methods to Study Online Course Participation

Melissa Ingram and Shirley M. Matteson

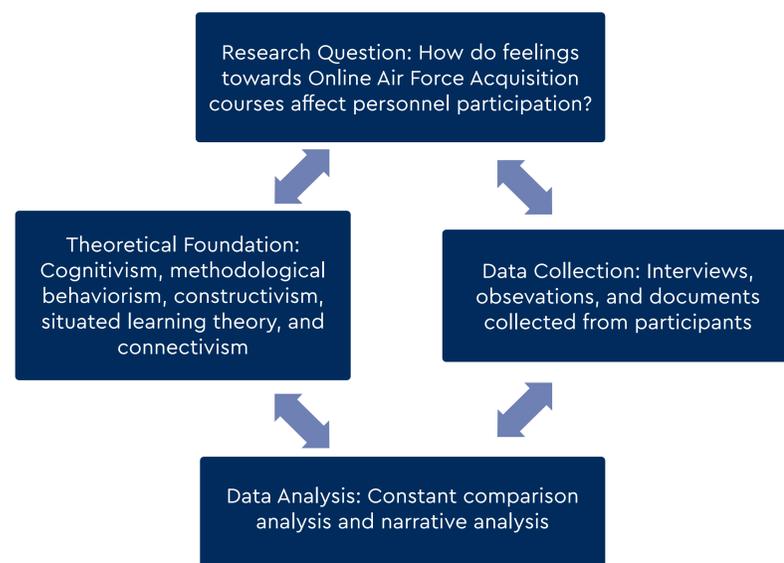


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Abstract

Participants in this qualitative case study were Air Force Acquisition personnel currently taking computer-based online courses. Air Force personnel were interviewed about their experiences with online courses and observed while engaging in an online course. The data were analyzed and themes emerged that indicated Air Force personnel were dissatisfied with specific aspects of the courses.

Codes Visual Representation of Data Collection and Analysis Process (Ingram & Matteson, 2019)



Data Collection and Analysis –Emerging Codes

Interview Themes and Codes

Overarching Theme With Supporting Codes

Benefits to Job/ Job Effectiveness	Educational Practices	Learning Environment
Application to job	Group/authentic activities	User-friendly
Mandatory	Rote learning	Supervisor input or influence
Targeted training	Course information/length	Work/course balance
Beneficial later to career	Repetitive	
Motivation		

Observation Themes and Codes

Overarching Theme With Supporting Codes

Benefits to Job/ Job Effectiveness	Educational Practices	Learning Environment
Expectations	Passive participation	Annoyance
Job application	Rote understanding/ procedures	Neutrality
		Course/job balance

Introduction

The purpose of this study was to determine if there was a relationship between the teacher-centered format of online course delivery and Air Force Acquisition (AFA) personnel participation. AFA personnel have been tasked with taking 3 to 30 required online courses in order to gain Air Force job certifications (Defense Acquisition Workforce Improvement Act, 2017).

This research project sought to answer the question "How do students' perceptions towards the current format (i.e. teacher-centered) of online AFA (AFA) courses affect AFA personnel (student) participation?"

The findings of this study could assist in the redesign of AFA courses, which has been an under investigated field. The researchers believe that similar companies and/or professional

Theoretical Framework and Ties to Online AFA Courses

Educational Theory	Highlights	Application to AFA Courses
Behaviorism	Students have no prior knowledge of a subject; educators assess if learning has occurred through the assessment of student actions (Rodriguez, 2012; Nugent, 2013)	Learning is assessed through the overuse of drill and practice and factual questions seen in mid-course (formative) and end-of-course (summative) multiple choice assessments (Schug, 2003)
Cognitive Learning	Students have no prior knowledge of a subject; learners code inputs stored in short-term memory to move into long term memory (Siemens, 2014)	Learners should move knowledge into long-term storage (potential application to job) but may be unable due to the passive role of the learner
Constructivist	Learning allows students to pair personal experience with presented facts; learners use communities/social interaction to build a stronger knowledge foundation (Piaget, 1936/1952; Oblinger, 2004)	Learners may use knowledge gained in future AFA courses
Situated Learning Theory	Skills learned are not transferrable if learned in a specific context; students learn more if they are active participants in the process (Brown et al., 1989; Lave & Wegner, 1991)	Online AFA courses rely on passive learning techniques; students may not be able to apply knowledge to real-life situations
Connectivism	Addresses changes in information due to Digital Age; learners take in information then decide if it is important; ties prior knowledge with socially-learned facts to amplify learning (Siemens, 2014)	Online AFA courses teach federal and Air Force regulations which change based on emerging needs; personnel may be able to better apply facts to real-life situations if the knowledge is transferred to the people who need it (DAWIA, 2017; Siemens, 2014)

Methods

A correlational explanatory approach was employed for this qualitative study. The data collected included both the experiences of each participant and some demographic information which provided a more complete background of each participant.

The pilot study was comprised of responses from 3 personnel ranging from 26–33 years of age. This group was particularly targeted as a wide range of individuals take AFA courses, including personnel who have taken a few courses (younger personnel) and numerous courses over the years (older personnel). The participants were native English speakers and active duty Air Force members.

Data collected included three interviews, three observations, and artifacts/documents provided by the participants. The artifacts and documents consisted of records concerning online AFA courses completed by each participant. The researcher also maintained a reflexive journal in which pertinent information about the interviews and observations were recorded.

Conclusion

A narrative analysis of the data showed the interviews and observations worked together to tell roughly the same story. The participants would enjoy the courses more if they could apply the knowledge to their jobs. The only AFA courses they found enjoyable had student-to-student and student-to-instructor interaction and used projects to teach and reinforce concepts. Drastic changes were needed in regard to the course delivery method and how the information applied to daily responsibilities.

A constant comparison analysis yielded the same results. Most courses were not applicable to the participants' current jobs. Courses were taken because of workplace expectations. Participants found the most beneficial courses were ones that better helped them in their daily tasks.

The next step is to continue this research project using a greater number of personnel in different locations. The data collected will be analyzed using the same methods.

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