

**ARTIFICIAL INTELLIGENCE FOR USE IN
INSTRUCTIONAL TECHNOLOGY IN AN EXTRA-
TERRESTRIAL LEARNING ENVIRONMENT: A
QUALITATIVE STUDY**

By

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Method

- *Qualitative

- *Phenomenological

- *Technology Acceptance Model (TAM)

Method (con't)

The qualitative, phenomenological, design is most appropriate for this study because the data used in this research study will come from instructors who teach in a distance learning environment.

The Technology Assistance Model is most appropriate because it is designed to evaluate the usefulness of technology as it relates to human decision-making.

The information compiled will be from the collective result of their experience, expertise, theories, and opinions of instructors who have taught in a distance-learning environment.

Introduction

This study is about the use of Artificial Intelligence (AI) technology to facilitate an extra-terrestrial learning and communication environment.

The use (AI) technology in extra-terrestrial learning environment may be fundamental to the success of a manned mission to another planet such as Mars.

Research Question

- * Research Question: How do Learning Technology Instructors feel about using an artificially intelligent technology solution such as IBM Watson as a means to engage learners in an extra-terrestrial environment, such as a manned mission to the planet Mars, as opposed to using a synchronous technology option for engagement?

Research Question (explanation)

- * Would Learning Technology Instructors prefer to rely on Earth-based technology to communicate with learners in an extra-planetary, extra-terrestrial environment or supply the learners with a comprehensive database for which the learners could access their study material without having to interact with a live human instructor during the process of the course?
- * At the end of the course, the information would be submitted to the instructor, back to Earth for review, via best currently known technology practices.

Theory and Research

Communication between the humans on a manned mission on Mars would have some different challenges than those of the between the Earth and ISS and the Moon. Beyond the planetary system of the Earth and the Moon and, such as a manned trip to or on Mars, sending and receiving of information from Earth to Mars and vice versa would experience significant latency of about 13 minutes at minimum (Gonzalez, 2013).

Current Research

- * Studies show that the Internet can be an effective tool for use even in the extra-terrestrial environment of the Earth's planetary system (Mann, 2013). However, the need for an AI such as an interactive database might prove useful. Communications technology inside of the Earth's planetary system can be interrupted by solar interference.

Limitations

- * One of the limitations on this study is that we have never actually had a manned mission beyond the Earth's planetary system. Because of that fact, the information regarding this study is theory based on scientific data collected from instructors with experience and expertise with regard to currently-known distance-learning environments.

Future Research

- * On the Earth, there are far more alternatives to the communication challenges caused by solar interference than there would be on an extra-terrestrial environment like the ISS. Since it takes about 13 minutes for communication signals to travel back and forth from the Earth to Mars, some kind of work around technology that can minimize the latency would have to be implemented as a replacement.
- * Laser technology is being researched in hopes for a faster way of sending data from Earth to extra-terrestrial targets.

Questions?

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