

Running Head: E-Learning: Different Methods & Approaches

E-Learning: Different Methods and Approaches

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The methods of teaching have changed many times throughout the years. Gone are the days of students “sitting quietly” in their chairs, working on homework with pencil and paper, after the lesson material has been discussed on a chalkboard. In many of the schools today, you will find students sitting behind a computer; watching either an overhead projector, or the teacher’s computer that is connected, via a peripheral, to a main screen at the front of the classroom. This entire transformation has been brought about because of the changes that have been made due to technology. Whether or not people like, or dislike, these changes is irrelevant. What is relevant is that these changes have taken place. So, the children, *and the teachers*, have either changed with them, or been “left behind.”

### Purpose Statement

The main purpose in writing this essay is to discuss and analyze two different types of approaches used to teach e-learning in educational settings. Analyzing the strengths and weaknesses of the two different types of approaches will lead to a conclusion, which will show which method appears to be working most efficiently.

### Qualitative Research Approach

The first type of research analyzed was qualitative research approach methods. When researching these methods, it was discovered there is not one, clear-cut method, of performing qualitative research. Although the steps and procedures of, “Defining the purpose statement; stating the research questions, hypotheses, or objectives; writing the literature review and theory-based of the study; and then writing the methods section

(Creswell, 2003, p.143),” may be followed in every type of research, there are still variances *within* those steps that can make a difference.

There is a vast array of definitions for e-learning, however for the purpose of this essay, the one, which will be used, is:

Internet-enabled learning. Components can include content delivery in multiple formats, management of the learning experience, and a networked community of learners, content developers and experts (Gunasekaran, McNeil, & Shaul, 2002).

The teaching methods, or, “changes in the classroom,” previously mentioned, are pushing for more and more institutions to incorporate e-learning into their curricula, or they will be “left behind” the technological surge. One might ask, “How are these methods changing?” In today’s world, with information changing constantly, teachers are at an extreme disadvantage. The textbooks that they are supposed to teach from are outdated by the time that they are boxed up in the cartons to be shipped. Technology, on the other hand, assists in providing a shorter transfer of information. The Internet, for example, provides either the teacher, or the student, the capability of obtaining information on any subject, from almost any time period, with the click of a button. And, one of the most amazing things of all is that all of this occurs at a lower cost than purchasing a textbook.

The research is there to prove this, as Alexander believes, “... that using technology in both classroom and distance learning will produce these advantages:

- improving the quality of learning;
- improving access to education and training;
- reducing the costs of education; and
- improving the cost-effectiveness of education. (as cited in Gunasekaran, et al., 2002, p. 45).

*Strengths:*

The strengths when conducting *qualitative research* can be seen in the educational culture, no matter which field of study is chosen to be examined. Educational performance, for example, could be a research field studied across several cultures. Observations, interviews, e-mails, and photographs are all different types of research tools that can be used to study research, when performing a qualitative research. These numerous type of tools, from which you can pull data from, would help tremendously when trying to study / examine / design course materials for an e-learning class.

*Weaknesses:*

However, there are also weaknesses that could be encountered when conducting *qualitative research* for an e-learning class. According to Ralph Brockett (personal communication, October 21, 2008), “Narrative” tradition is one of the major traditions used, when conducting qualitative research. The reason for which this is difficult is because narrative research is one in which the research examines individuals’ lives, and then, asks one or more individuals to provide stories about their lives.

This information is then retold or restoried by the researcher into a narrative chronology. In the end, the narrative combines views from the participant’s life

with those of the researcher's life in a collaborative narrative (as cited in Creswell, 2003, p. 15).

The original meanings of the stories can be misinterpreted several times by the time they reach the intended recipient, showing this weakness when being used for qualitative research for an e-learning class.

Another weakness can be seen in Brian Fay's research on reasoning processes:

Social phenomena ... are also events and objects, which occur in the world. For this reason to understand them requires more than just knowing *what* they mean; we must also know *why* they occurred... Put succinctly, to comprehend intentional acts we need to know more than just their meaning; we also need to know their cause (as cited in Phillips).

## Quantitative Research Approach

The other type of research analyzed was quantitative research approach methods. Quantitative research involves the collection of numerical data that are analyzed through statistical techniques (Brockett, 2007). When making comparisons between quantitative and qualitative research approaches, one of the comparisons that the researcher will first notice, is the fact that quantitative research focuses more on the data, whereas qualitative research focuses more on the individual.

The fact that *data* is the main focus of this research approach immediately places research as the focal point of strength for research of e-learning in educational settings. There has been a rapid growth in e-learning classes in postsecondary schools in recent years. There are numerous reasons for this growth. E-learning provides faster learning at

reduced costs, increased access to learning, and clear accountability for all participants in the learning process (Gunasekaran et al., 2002).

A quantitative research study can be used as an example for this research essay. The purpose of this research study was to: explore the factors that influence students' community experiences, to develop and field-test the Classroom Community Scale, and to determine its validity and reliability for use with postsecondary students taking online course ("The Internet and Higher Education, Vol. 5," 2002, p.2) .

*Strengths:*

First, a strength that has been found through quantitative research is a sense of community in online courses. A very important factor that a teacher must take into consideration when designing / creating an online course is the *size of the classroom*. The reason this is important is because research has shown when students are enrolled and taking online courses, it is very important that they have this sense of a community in their classroom. Research has shown that when students possess this sense of community, then they will help one another attempt to achieve their educational goals. For example, Baym and Donath's research states that, "Members of online communities support common goals and a strong commitment to community goals" (as cited in "The Internet and Higher Education, Vol. 5," 2002, p.4) . The level of this commitment weakens whenever e-learning sources, such as Blackboard, asynchronous learning networks (ALNs), or WebCt software classroom sizes are increased. This is further evidence that the size of the classroom is very important to students' success rates.

Another strength found in the quantitative research evaluated was the fact that there was a *precise instrument of research approach used*. In this research, three criteria were used to determine the number of factors to extract: the screen plot, the Kaiser-Gutman Rule, and solution interpretability. Every one of these criteria had factors that were easily interpretable, because of the preciseness of the type of evaluation. Whereas *qualitative research* has the “openness,” which often has more of a “freedom,” when responding to questions, this *quantitative research* requires the research participants select from a preselected list of answers.

#### *Weaknesses:*

Carr (2000) noted that dropout rates are often 10 to 20 percentage points higher in distance education courses than in traditional courses. She also reported significant variation among schools, with some postsecondary schools reporting course-completion rates of more than 80% and others finding fewer than 50% of distance education students finish their courses (as cited in “The Internet and Higher Education, Vol. 5,” 2002, p.1) . This variance in completion rates the statistical data could be attributed to many reasons. A reason given in the research was the fact that there was no attempt to control either the design or the instructional delivery of these courses by the researcher (as cited in “The Internet and Higher Education, Vol. 5,” 2002) .

## Conclusion

In this essay, an attempt has been made to study two different types of research approaches, to review both approaches and their application to teaching e-learning courses in educational settings. Although *qualitative research* method approaches can be

used to study e-learning, after the research that has been conducted, it can be seen that *quantitative research* methods would yield better results in educational settings.

One of the main reasons behind this conclusion includes the fact that there is not one, *clear-cut*, method to use when conducting qualitative research. When teaching a subject, such as e-learning, a research methodology which consists of repetitive data-gathering techniques / tools would yield more accurate results.

Tied into this reason is a fact, which was previously mentioned in this research. This is that e-learning is a technological learning tool. In today's society, it is hard for teachers to stay ahead because of the fact that information and technology changes so quickly. If the teachers do not stay ahead themselves, the students, in turn, will also fall behind in learning the knowledge that they need to learn. With so much knowledge available, and so many different types of people, how can this be done?

The answer is simple, by e-learning. Or, as Doug Upchurch, the managing director of Insights, states:

If we are moving to a world of independent learners, then we must teach them how to learn. The key to improving e-learning with a preferred learning style evaluation is to then provide learning components within the training that cater for each style, and we believe that KnowledgePool is a leader within this space. (as cited in Gunasekaran, et al., 2002, p. 45).

KnowledgePool is an e-learning, IT, and business skills training company, which offers online evaluation systems to students. These evaluation systems allow students to explore



their individual strengths and weaknesses, to help them out with training needs, or job searches.

As previously stated, using *quantitative research* takes the focus off the “individual,” and places it onto the data. This data has no room for “personal interpretation,” which can sometimes be done by the researcher, when performing *qualitative research*. By using *quantitative research* to assist with teaching e-learning there are specific, set, research methods that are to be followed throughout the research process. When this, *quantitative research*, is used, there is a better “plan” that can be followed. As the results from this research suggest, following the aforementioned research will lead to the most efficient e-learning teaching styles in educational settings.

### References

Brockett, Ralph (2007) . Quantitative Research Methods – Talking Points.

Creswell, John W. (2003) . *Research Design: Qualitative, Quantitative, & Mixed Methods Approaches* (2<sup>nd</sup> ed.) . Thousand Oaks, CA: Sage Publications, Inc.

Gunasekaran, A., McNeil, Ronald D., & Shaul, Dennis . E-learning: research and applications. *Industrial & Commercial Training*, 34, 44 - 53.

Phillips, D.C. Class Handout for EP 506 (pp 49 – 64).

Royal, Alfred P., (2002). Development of an instrument to measure classroom community. *The Internet and Higher Education*, volume 5. doi:10.1016/S1096-7516(02)00102-1

