Chapter Three: Research Methodology

Carolyn Joyce Freitag

Drexel University

Part I: Introduction

This researcher has been providing private tutoring for the past year for several students from various educational backgrounds. All tutoring sessions are private and take place in the researcher's home office. Presently, six of the pupils are first and second grade students and described by their parents as reluctant readers. The tutoring sessions are designed to provide reading support and intervention and utilize a direct-instruction approach to reading which introduces the students to various strategies they can use to improve their reading fluency. Curriculum based measurement is used to set goals and track student progress. Since it has been this researchers experience that technology increases student engagement, students are encouraged to follow up at home on websites, such as Starfall.com or ReadWriteThink.org with activities designed to improve phonics, word recognition skills and reading fluency. Although these are very useful sites, they may not be the right fit for all of the students, since all learners have different learning styles as well as different strengths. Employing a strategy that utilizes technology as well as a student's particular learner strengths would be ideal.

Part **II: Research Problem and Research Purpose**

The current tutoring sessions have been developed to meet the needs of early readers; however, this researcher has observed that many of the students are still reluctant to engage in reading enough to develop the skills necessary to sustain independent reading. Students will need to develop skills to read for the content area subjects as well as for pleasure, so it is important to employ an intervention that will turn the reluctant reader on to reading.

Student engagement in reading activities is important since literacy has been linked to future academic success (Biancaros & Snow, 2006). Students in the first and second grade show engagement when they talk about favorite books and choose familiar books for independent

reading (Beaver, 2006, p. 263). Wigfield and Guthrie (2008) explain that an engaged reader will be able to develop reading strategies to enhance comprehension and will also enjoy reading for pleasure.

If this research does find that the learner specific technology integration has increased student engagement, then this practice will be incorporated into future tutoring sessions when necessary. Sharing it with other teachers may encourage them to find new ways to use Gardner's multiple intelligences theory in the classroom. However, the ultimate goal of this action research project is to develop in students a passion for learning and the tools to succeed.

With this action research study, this researcher will be determine if student engagement in reading among a group of first and second grade students will improve with the use of iPad applications that accommodate their specific learner strengths as determined by a multiple intelligence inventory.

If this research does find that the learner specific technology integration has increased student engagement, then this practice will be incorporated into future tutoring sessions when necessary. Sharing it with other teachers may encourage them to find new ways to use Gardner's multiple intelligences theory in the classroom. However, the ultimate goal of this action research project is to develop in students a passion for learning and the tools to succeed.

Part III: Methodology

As a first step in the action research this researcher will utilize a Mixed-Method design when collecting and interpreting data. Using information gathered through a review of the literature (Guthrie, 2014), this researcher will create a rubric using characteristics of student engagement to use while observing the students during their tutoring sessions. This observation method is

qualitative data collection technique and as our text states "qualitative methods are more appropriately applied to action research efforts…" (Mills, 2013, p. 83)

The second step will utilize the same information used in the rubric to create a questionnaire for the parents to complete regarding the child's engagement in reading activities at home. At the completion of the study, the observation and the parent questionnaire will be repeated to determine the effectiveness of learner specific technology. The questionnaire will use a likert scale rating system and will be created using Survey Monkey. The parents will access through an email. The students will be asked similar questions utilizing an interview format. Their answers will also utilize a likert scale rating system. A likert scale is a form of quantitative data collection, since a number rating is assigned to the response in order to calculate the results. Despite the responses being of a numeric nature, it is still considered a form of descriptive data (Mills, 2013, p. 102).

The first two steps, the observation rubric and the parent and student questionnaires will help the researcher determine the student's level of reading engagement both before and after the study.

The third step of the action research project will be administering the multiple intelligences surveys. The surveys will be printed from a resource disc in an ISTE publication (McKenzie, 2005). This is qualitative data and will determine each student's dominant intelligences and appropriate technology.

The fourth step would be to determine to assign the learner specific apps to the students and begin the learner specific intervention. This intervention will consist of a project that will be completed using the learner specific apps.

The fifth and final step in the action research would be to repeat the student and parent reading engagement surveys as well as the observational rubric to determine the student's level of reading engagement. These results will be compared to the results gathered in first two steps of the project using a graph.

Part IV: Constituents

The participants in this study will consist of a group of first and second grade students that this researcher has been providing private tutoring to for the past year.   Presently there are eight students. Six of the students are tutored for reading support and intervention. This group consists of two first graders and four second graders. All but two of the students are home schooled. All sessions are private and take place in the researcher's home office. All of the constituents live in Bucks and Montgomery Counties in the Philadelphia suburbs.

The parents will also be considered participants in the project, since they will be observing the students at home and during schoolwork or homework and using these observations to complete the parent surveys.

Part V: Survey Instruments

The survey instruments in this study will consist of the multiple intelligence questionnaires as well as the reading engagement observation rubrics and questionnaires.   An important instrument will be the students' iPads and the apps that are chosen for them to use. These apps will be used for remediation, research and reading as well as presentation tools for the end result of the projects assigned.

Graphs in the form of a table will present the results of student engagement surveys before the study as well as at the conclusion of the study that will compare the changes (positive or negative) in student engagement (Mills, 2013).

Bar graphs will be used to display the results of the multiple intelligence surveys. There will be a separate graph representing each student.

Part VI: Validity and Reliability

It is this researcher's goal to make sure that this research is both valid and reliable. While the students are completing their surveys it is important that the researcher only answer their questions and not infer anything else with leading answers or body language. It is also important that the researcher keep accurate journals, so that each phase of the research is documented. Since time with the student is generally one on one the researcher should be discreet when completing the observation rubric, so that the student is not influenced by the observation itself. All documents generated in the project should become part of the projects permanent file. This should include, but is not limited to: letters to parents, questionnaires, rubrics, lesson plans, student work, photographs, and graphs, tables and charts of the results.

To ensure reliability, this researcher is also having the parents fill out questionnaires by observing the students reading engagement in a different venue. These results will use the same scales and will be presented along with the other results. It would also be prudent to have a colleague look over the results and computations to check for errors.

Mills explains the difference between validity and reliability by stating that " a valid est that measures what it purports to measure will do so consistently over time. A reliable test may consistently measure the wrong thing" (2013, p. 120).

Part VII: Timeline of Research

These are the projected amount of time for each phase of the project. Following this timeline will help to keep it organized.

Phase 1: Identify characteristics of reading engagement through literature review (1 week)

Phase 2: Develop engagement rubric (1 week)

Phase 3: Determine students level of reading engagement before study using rubric, parent and student reading engagement questionnaires (10 days)

Phase 4: Determine students' dominant intelligences and appropriate technologies with multiple intelligence surveys and review of available iPad apps (10 days)

Phase 5: Implement student specific intervention (3 weeks)

Phase 6: Determine student's level of reading engagement at end of study (10 days)

Phase 7: Evaluation and synthesize data; create presentation (2 weeks)

Part VIII: Ethical Consideration

The text states that researchers must be aware of ethical considerations and that they must be addressed (Mills, 2013). Since I working out of my home with students that are tutored on a volunteer basis, I only need to inform the parents that this intervention is being used as the basis of an action research project for my Capstone Project. Even though it is an intervention that could benefit the students, explaining the project to the parents is the ethical thing to do. This researcher will be aware of ethical considerations throughout the study. All information collected about the students though the various questionnaires should be kept confidential and their names should never be used on them. All data collected will be accurately recorded and presented, regardless of the results.

Part IX: Summary

Through this study, it is hoped that each student's engagement with reading will be improved..

Since reading is an essential skill used across the curriculum, each student will have a better

chance of becoming a successful learner. The findings of this study will also influence the way

that this researcher incorporates technology into lesson planning.

Part X: Appendix

Questions for Parent Reading Engagement Survey:

1. My child often reads independently.

    Very true
    Somewhat True
    Not true

2. My child reads favorite topics and authors.

    Very true
    Somewhat True
    Not true

3. My child is easily distracted in self-selected reading.

    Very true
    Somewhat True
    Not true

4. My child works hard in reading.

    Very true
    Somewhat True
    Not true

5. My child is a confident reader

    Very true
    Somewhat True
    Not true

6. My child uses comprehension strategies well.

   Very true
   Somewhat True
   Not true

7. My child thinks deeply about the content of texts

   Very true
   Somewhat True
   Not true

8. My child enjoys discussing books with peers.

   Very true
   Somewhat True
   Not true

References

Beaver, J. M. (2006). *Developmental reading assessment K-3: Teacher guide, 2nd ed.* Parsippany, NJ: Pearson Education, Inc.

Guthrie, J. T. (2014). Reading Engagement Index.

McKenzie, W. (2005). Multiple Intelligences and Instructional Technology. Eugene, OR: International Society for Technology in Education, 2nd ed.

Mills, G. E. (2013). Action research; a guide for the teacher researcher, 5th ed. Upper Saddle River, NJ: Pearson Education, Inc.

Wigfield, A., Guthrie, J. T., Perencevich, K. C., Taboada, A., Klauda, S. L., McRae, A., & Barbosa, P. (2008). Role of reading engagement in mediating effects of reading comprehension instruction on reading outcomes. *Psychology in the Schools, 45*(5), 432-445. doi: 10.1002/pits.20307