Capstone Log – EDRS 8000 & EDRS 8900
Instructional Technology Department

Candidate: Jennifer D. Burke	Mentor/Title: Karin Searls, teacher	School/District: Centennial Place Elementary/ Atlanta Public Schools
Research Project Title: **The effect of electronic book use on reading enjoyment and comprehension in young children**		

You are not required to reflect after each entry. Reflections can address one or more entries in the log. Just delete the reflection row if you do not use it.

Date	Activity/Amount of Time (Please total the time after the last entry.)	PSC/ISTE Standards
Aug 28 - Oct 10, 2013	Literature review, completed over 5 weeks (40 HOURS). Submitted literature review map.	PSC 1.4 / ISTE 1d PSC 6.1 / ISTE 61, 6b
Reflection: Completing the literature review was both time consuming and rewarding. The more I read about the topic, the more interested I became in completing this project as well as in learning more about ways children could benefit from using ebooks. Prior to this I had been somewhat opposed to their value, not because I doubt the benefit of technology to help readers, but because I believe in the importance for young children to be able to experience reading by engage all their senses – touching the material, smelling it, looking at pictures, listening to the text being read aloud. Although ebooks will read aloud and children are engaged by the pictures and animations, they still miss some of the sensory interaction that I believe is important to learning to read. The literature review has been very rewarding; I continue to read what I discover on this issue and use the information to guide purchasing decisions in my library.		
9-13-13	3.0 hours – experimenting with iPad and electronic books available through the school library and several vendors. 1.0 hour was spent with a 6-year-old playing with electronic books on my phone. (4 HOURS)	PSC 3.2/ISTE 3b PSC 3.5/ISTE 3e PSC 3.6/ISTE3f
Reflection: The purpose of this activity was for me to document through personal experience possible difficulties faced by users to access ebooks. I noted several problems I encountered using my iPad and reported technical difficulties to our district's media services coordinator.		
Oct 10-20, 2013	Topic development; completed 1st draft of literature review (10 HOURS)	PSC 2.8 / ISTE 2h
Reflection: During these five days I spent time drafting and revising my literature review, verifying citations, and adding information where warranted.		
Nov 10, 2013.	Completed 2nd draft of literature review, expanded topic and developed research plan for proposal, identified books to use for intervention. Developed survey instruments, consent forms for parents and students. Completed CITI training. (9 HOURS)	PSC 2.8 / ISTE 2h PSC 6.1 / ISTE 6a, 6b
Reflection:		

Because I would be working with children conducting formal social science research I was require to complete training regarding procedures and ethical behavior as part of the Kennesaw State University's Instructional review Board application process. Although it is acceptable for me to conduct surveys as needed during the course of completing my normal work, such as surveying students to learn which library books they would like me to buy, formal research has more constraints than I had realized. This activity also required a period of reflection, as I considered more deeply the direction I wanted to take the research and began thinking about procedural needs.

Nov 30 – Dec 1, 2013	used printed book text to develop multiple-choice vocabulary pre- / post-tests, multiple-choice comprehension pre- / post-tests, developed 10-question motivation to read survey adapted from survey (4.5 HOURS)	PSC 2.6 / ISTE 2f PSC 2.7 / ISTE 2h

Reflection:
Because I was creating the pre- and post-test instruments it was necessary to read the print book several times in order to create questions that were challenging but still clear enough to answer. I needed to be sure there was one good right answer, and three incorrect answers, but at least one of them needed to be plausible so students would have to make a choice. Creating the vocabulary test was also challenging because I needed to be sure the meaning of the ten words I selected could be deduced from context clues contained in the story, and still have a short enough definition to fit easily into the context of the test document. It was necessary to focus on using language within my definitions and questions that were readable by most 4th grade students. When developing my 10-questions motivation to read survey, I was adapting from an existing document, so it was only necessary to select test items related to my particular purpose and scope of the experiment.

Dec 8, - 2013, Dec 16, 2013	Drafted and submitted IRB application form to Kennesaw State University and to Atlanta Public Schools. 3 hours completing application in each formats. 2 hours submitting follow-up information and responding to questions. (8 HOURS)	PSC 1.2 / ISTE 1b PSC 2.6 / ISTE 2f

Reflection:
There were numerous technical challenges in converting my initial research proposal into the format required by Kennesaw State University and to Atlanta Public Schools. What could have been an easy copy-and-paste operation became extensive rewriting in some areas. I believe that this phase of my work would have been streamlined had we been introduced to the IRB process earlier in the coursework, and given the opportunity to become familiar with specific application processes. However, many of my colleagues were not required to complete this step in detail because they were interviewing adults.

Jan/19-20/2014	Reviewed and completed timeline form. Developed draft research plan using template provided. (4 HOURS)	PSC 1.2 / ISTE 1b PSC 2.6 / ISTE 2f
1-20-14	Sent follow up emails to KSU and APS about status of IRB. Provided follow up information to APS (1.5 HOURS)	PSC 1.2 / ISTE 1b

Reflection:
I became concerned that I had gotten no response from either institution about the status of the application after submitting follow up responses to their questions. After my follow-up contact they confirmed the applications were under review and confirmation would be forthcoming.

1-22-14	Gathered complete list of 4th grade students in preparation for selecting test subjects. Uploaded survey and consent documents to Dropbox In preparation for later printing. Consulted with 4th grade ELA teacher about scheduling study activities. (3 HOURS)	PSC 3.7 / ISTE 3g
1-26-14	1-26-14 printed and delivered information and consent letter	

	to school principal Alison Shelton. Gathered print books for research study (1 HOUR)	PSC 3.7 / ISTE 3g
2-6-14	received APS IRB approval; revised research plan to reflect dates (30 min)	PSC 3.7 / ISTE 3g PSC 1.2 / ISTE 1b
2-8-14	Created sampling lists to identify participants (2.5 HOURS)	PSC 2.8 / ISTE 2h

Reflection:

I applied what I learned from Qualitative and Quantitative research EDRS 8900 to use Excel data analysis processes to select my research participant sample. To mirror gender makeup of 4th grade students enrolled at CPES, I determined I will need 58% boys, 42% girls. Sample size n=30, consisting of 17 boys, 13 girls. Created separate lists of boys and girls, sorted alphabetically by 1st names to eliminate normal name bias usual to listing students by last name. I used gender-selected lists because I wanted to be sure that my experiment sample group was similar in makeup to our school population. This required running the analysis on each list several times. Finally I had a list of names with classroom names, and created code numbers for each so when I analyze data, I would be less likely to experience any bias in analysis because I recognized student names. This strategy was effective; after a few days of interviewing students and gathering survey forms I could not remember which was which. I could only identify intervention from control group responses because I had color coded them; the codes written in red represented the control group.

2-9-14	Reviewed statistical analysis concept (1 HOUR) Based on content, I will use the Wilcoxon statistical test for my data because I will have paired data, and repeated measures.	PSC 2.8 / ISTE 2h
2-15-14	Revised multiple-choice pre-test to develop post-test (changed order of questions). revised multiple-choice vocabulary pre-test to develop post-test (changed order of questions) (1.5 HOURS)	PSC2.3 / ISTE 2g PSC 2.8 / ISTE 2h

Reflection:

I had not realized that I spent considerable time reviewing and revising my data plan, survey instruments, and analysis plans. Even though the survey instruments were approved through the IRB process, there were formatting issues that had to be addressed with each review of documents until I finally printed the survey instruments just before administering them to students. Another facet of reviewing the survey instruments was devising a coding strategy for data assessment, and ensuring that I had appropriately weighted each item and devised a usable answer key to make entering data more efficient.

2-18-14	Distributed consent letters to parents. Copied and coded pre and posttests. (.5 HOURS)	PSC 3.7 / ISTE 3g
March 3-5 2014	Reviewed Consent document with students to explain project and answer questions (8.5 HOURS).	PSC 3.7 / ISTE 3g

Reflection:
This was surprisingly time-consuming. I met to explain the experiment, review the student consent documents and answer any questions for 30 minutes each with 17 students whose parents had signed the consent form. A few students had questions about the process and were most concerned with whether they would be graded (they weren't) or miss recess. I assured them they would still have time for recess. (Ironically during the actual experiment it rained nearly every day and students couldn't go outside for recess, so they were fine with being in the library).

March 6-7, 2014	Students completed motivation to read surveys, vocabulary and story elements pretests, 15 minutes each with 17 students. (4.5 HOURS)	PSC 2.7 / ISTE 2h

Reflection:

Students completed both pre-tests quickly. To my knowledge none of them had read the story, so I expected they made what they considered reasonable guesses or predictions. I read aloud each Motivation to Read survey while they marked their answers to ensure that poor reading ability did not affect their understanding of the questions.

3/8/14 - 4/5/14	Daily reading intervention interval, each student read for 30 minutes and completed the 2 post tests and motivation survey. (8 HOURS)	PSC 2.5 / ISTE 2e PSC 3.2 / ISTE 3b PSC 3.4 / ISTE 3d

Reflection:

One student after reading and completing post-tests asked if she could get the reading ebooks at home so I gave her the website and password. I also provided the ebook URL and password to all students in the control group who completed the print reading exercise. One student decided not to continue to participate in the study when faced with the reading intervention.

April 5-7, 2014	Began entering and analyzing data. Started ANNOVA on motivation data. Considered validity issues due to size of sample (2.5 HOURS)	PSC 2.8 / ISTE 2h

Reflection:

My final research sample group was quite small. I discussed this with my research advisor as I was concerned with whether I should attempt to recruit a few more test subjects. However, given the time available for the research study, I determined it was preferable to carry on with the existing group and note the sample size in my discussion of limitations.

April 9-10, 2014	Began drafting analysis using paired t-test on motivation, reviewing and posting analysis (5 HOURS)	PSC 2.8 / ISTE 2h
4-16-14	Analyzed data, using- t-test with independent variables. Began summarizing data analysis and drafting report. (3 HOURS)	PSC 2.8 / ISTE 2h
4-20-14	Completing initial analysis draft and submitting to peers for review (4 HOURS)	PSC 2.8 / ISTE 2h
4-26-14	Revising draft to incorporating peer comments. Submitted completed analysis paper. (4 HOURS)	PSC 3.7 / ISTE 3g PSC 6.2 / ISTE 6c
4-27-14	6 hours - created and posted presentation (6 HOURS)	PSC 3.7 / ISTE 3g PSC 6.2 / ISTE 6c
4-28-14	5 hours - completed final paper with appendices (5 HOURS)	PSC 2.8 / ISTE 2h PSC 3.7 / ISTE 3g PSC 6.2 / ISTE 6c
6-24-14	8 hours – revised video presentation for portfolio. (8 HOURS)	PSC 3.7 / ISTE 3g PSC 6.2 / ISTE 6c

Reflection:

Keeping a detailed log of activities for a research project of this type was extremely challenging but rewarding. I had expected at the beginning of the project that the majority of my time would be spent on data analysis and writing the summary report. However, the largest amount of time was spent at the front end of the project, about 40 hours, reading and taking notes from existing literature. Devoting so much energy on the literature review increased my understanding of the issues related to ebooks and has given me insights into the publishing business as well as product development. It has become apparent to me, however, that the current electronic book market is being driven by publishers and less by consumers or educators. I have concerns that the use of electronic books may be perceived in a short time as another technology fad, because less attention has been paid on developing standards to ensure usability, while

educational publishers rush to bring product to market.

Mapping out the research plan into templates also required significant time, but following that plan made the actual experiment phase of the project move more smoothly. Although the research study experiment spanned several weeks, some task was completed each day so the activity was manageable. The entire capstone experience was enlightening and energizing and has made me appreciate more the value of this phase of our graduate program.

Total Hours: [## hours]:	148.9 HOURS

DIVERSITY								
(Place an X in the box representing the race/ethnicity and subgroups involved in this capstone.)								
Ethnicity	**P-12 Faculty/Staff**				**P-12 Students**			
	P-2	3-5	6-8	9-12	P-2	3-5	6-8	9-12
Race/Ethnicity:								
Asian						x		
Black		x				x		
Hispanic						x		
Native American/Alaskan Native								
White						x		
Multiracial		x				x		
Subgroups:								
Students with Disabilities		x				x		
Limited English Proficiency						x		
Eligible for Free/Reduced Meals		x				x		

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