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BLENDED LEARNING IN THE MIDDLE SCHOOL CLASSROOM

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Abstract

Blended learning is an instructional approach that involves a blend of online learning opportunities with face-to-face learning in the classroom. While research shows that blended learning is an effective teaching practice, the implementation of a blended learning classroom differs by teacher and school. This qualitative research study focused on the opinions of middle school students and the aspects of online learning and face-to-face learning that create the most effective blended learning environment to prepare them for daily assignments, quizzes, and tests.

Blended Learning in the Middle School Classroom

Many studies have focused on the effectiveness of the blended learning environment in higher education settings, but very rarely is it commonly researched in a middle school setting. Teachers who use this instructional technique with 1:1 devices and a learning management system strive to identify what specific aspects of face-to-face and online learning work best for this age group. Constant access to resources, immediate feedback from assessments, online communication and collaboration no matter the distance between the participants are all key characteristics older participants have identified in developing a blended learning environment where students feel connected and supported (Dias & Diniz, 2014; Kang & Im, 2013). This study focused on how a group of middle school students' experiences in a blended learning environment affected their learning. The features of the blended learning environment students perceive to be most beneficial in preparing them to achieve academic success were explored. The use of computers for a combination of online learning and face-to-face learning to create a blended learning environment is a shared experience or phenomenon that all participants are experiencing for the first time during this study.

Purpose

As technology access increases rapidly in classrooms worldwide, teachers and students are struggling to find the best way to create a blended learning environment that emphasizes the most beneficial aspects of online and face-to-face instruction. The addition of 1:1 devices for students has led researchers to pursue how to create the most effective blended learning environment to help prepare students and set them up for academic success. Blended learning is a vague term that refers to the use of both online learning and face-to-face learning. Many studies have researched the effectiveness of blended learning as a whole without stating

specifically what made the blended learning so effective. Previous studies in this field have also focused primarily on post-secondary or high school level courses. The goal of this study was to gain insight in to which features of the blended learning environment middle school students perceive to be the most beneficial towards academic preparedness and success.

Research Question

This qualitative study answered the following question:

What features of the blended learning environment do middle school students feel most prepared them for classroom assignments and assessments?

Conceptual Framework

Blended learning is a phenomenon that has emerged with developing technology. There are many approaches to creating a balance in face-to-face and online learning within the blended learning framework (Rossett, Douglis, & Frazee, 2003; Valiathan, 2002). How it can and should be integrated in the educational learning and teaching environments, specifically blended learning environments that include both face-to-face and online learning has been studied primarily with college age and high school students. The study conducted by Gecer & Dag (2012) focused on the perceptions of college students enrolled in a mathematics education course. The methods were strictly qualitative as the data was collected through an open-ended survey at the completion of a particular course that provided a blended learning environment. Gecer and Dag (2012) concluded that students have positive attitudes towards blended learning environments in situations where resources were made available for constant access. Aside from the constant access to resources that a blended learning platform can provide, other features such as assignments, calendars, online discussion threads, modules, and assessments should also be considered and compared to those offered only in a face-to-face learning environment. For

example, some students enjoy online discussion threads so that they can participate in the conversation while still having time to formulate their response without having to vocalize their thoughts in front of peers. On the other hand, some students are better-spoken and prefer a verbal debate.

Previous studies with college students have shown that successfulness and attitude towards blended learning and face-to-face learning environments are similar and positive (Delialioğlu & Yıldırım, 2007). While blended learning received positive reviews, the specific aspects or features that created the most effective environment for students to achieve have not been identified in the results. Students enrolled in the course did show higher achievement on assessments throughout the course than their counterparts enrolled in a traditional face-to-face only version of the course.

Chang, Shu, Liang, Tseng, & Hsu (2014) conducted an experimental design with a group of 11th grade vocational high school students in Taiwan to determine the effect of blended learning on achievement scores as well as self-assessments. During the study half of the participants were taught using a blended learning approach while the other half participated in a traditional classroom learning the same material. The study concluded that there was no significant difference in achievement scores on the end of course assessment given to all participants (Chang et al., 2014). The self-assessment completed by students did however show a significant increase in scores for the students who completed the blended learning course versus the traditional course. Chang et al. (2014) concluded that while there was no significant difference in achievement scores, it was clear the perception of students participating in the experimental group was higher, favoring the blended learning model.

Kazu & Demirkol (2014) conducted a similar study in Turkey to analyze the effect of a blended learning environment on students enrolled in an 11th grade biology course. An experimental design was used and students were given pre and post assessments to determine if there was a significant difference in achievement of students who participated in a blended learning class versus the control group. The pre-assessment scores for each group were similar, but the post-assessment results showed there was a significant increase in scores for students completing the blended learning course. Kazu & Demirkol (2014) concluded that the blended learning had a positive effect on the achievement of students and also that gender did not affect the reults.

While each of these studies have valid results, they all took place in schools located outside of the United States and none of them with students younger than eleventh grade.

Method

In this study, the experiences of middle school students in a blended learning environment were evaluated qualitatively. Each participant was enrolled in a minimum of four blended learning classes during their seventh grade year. In the fall semester of that year, data was collected about their experiences. Each participant completed an anonymous open-ended survey during the research study and participated in a focus group at the conclusion of the nine-week study.

Participants

This study evaluated the perceptions of 98 seventh grade students at Dalton Middle School, located in Dalton, Georgia. Each of these participants were part of the same team within the school and shared the same five core-content teachers and classes. This study was their first time participating in a blended learning environment. Among the participants, 56% were male

and 44% were female. The ethnicity breakdown of participants was as follows: 69% were Hispanic/Latino, 13% White, 8% African American, 7% Bi-racial, and 2% Asian. The mean age of participants was 12 years old.

Measures

Two instruments were utilized to identify the perceptions students had about blended learning. The first instrument was an anonymous online survey with qualitative questions that were open-ended in nature or allowed for multiple responses to each question. The questions were crafted using the framework of Fraenkel et al. (2015). The focus of the survey was to determine the perception of students and which aspects of online learning and face-to-face learning they felt best prepared them for success on daily assignments and assessments in the classroom. See Appendix A for the survey questions. The second set of data was collected through focus group interviews. The protocol used in each focus group is found in Appendix B. Each session lasted 10-20 minutes in length. The students were asked a series of questions regarding their experience in a blended learning classroom and given an opportunity to share their thoughts freely. The interviewer recorded the sessions and took notes regarding specific things to go back and revisit from the recordings.

Procedure

The study was conducted on all students enrolled on Team R for seventh grade at Dalton Middle School. Students were placed on the team by administrators when scheduling for seventh grade and each participant and parent agreed to take part in the blended learning classroom environment. After eight weeks of participating in a blended learning environment where each of their core content (math, literacy, science, and social studies) teachers utilized a

blended learning approach, the students completed an anonymous survey online. After the

surveys were completed, the participants partook in focus group interview sessions that they

signed up for. Each focus group consisted of 8-10 students and was recorded by the interviewer

while notes and observations were also made throughout the session. The focus groups took

place in a classroom during the students' lunch period over the course of two weeks.

Data Analysis

To analyze the data collected, the survey responses were examined first and notes were

taken to note common responses. Based on the responses given, the focus group questions were

adjusted to address any clarifications or questions that arose during the second read through of

responses. The transcripts from the focus groups were then analyzed for themes of common

responses based on each question. These themes were then compared to those of the online

surveys completed by each participant. The themes were combined and four major themes were

deemed relevant and present across all of the data collected. One codebook was created to

highlight those themes and quotes that support each theme. See Table 1.

Table 1

Codebook for Survey and Focus Group Responses

Code	Definition	Exemplary Quote(s)
Accessibility of Resources	This refers to students having access to educational materials located online 24/7.	"I enjoy that you can turn your work in as soon as you finish while you are at home." "I like that I don't always have to take notes, I can just look back at Canvas later."
Organization	This refers to the fact that more work is stored on the	"Instead of writing on papers that rip and can be lost we

	computer and less on paper so it can be retrieved and organized easily.	can type and save things on word documents." "I think it's more organized and easier to find stuff." "The modules are a neat way to help me find the stuff form class."
Feedback	This refers to the fact that through using a learning management system, the students are able to quickly see feedback from teachers through comments, inbox messages, and grades.	"It's helpful to me and many others. It helps me be on track and know what I miss and need to turn in. Also to know what score I have, grades." "I like how our teacher can talk to us through both the computer and in person."
Interaction	This refers to having the opportunity to interact with the teacher and peers during class and outside of class.	"I really like working in a group in the computer, and on paper." "I prefer to do discussions in person so I can talk to the people around me and not just type." "Having group projects and group work is my favorite thing about blended learning because we can start working in class and keep working together on the computer at home if we need to."

Trustworthiness

It is easy for a qualitative study to be questioned or discredited due to the amount of bias as the researcher works to analyze the data. To help ensure the results of this study are credible, the survey completed by participants was online and anonymous to safeguard that each participant was honest. Triangulation of data was used to ensure similar results from multiple data sources. Member checking was used to verify credibility by allowing participants to look at the transcripts or results before publication to be certain that they were expressed correctly and

clear up any confusion (Shenton, 2004). Transferability falls under the idea of external validity (Shenton, 2004). The researcher developed a study that has results that can be applied to a larger population of people due to a large sample size and random sampling.

Results

The first theme identified in this study was the positive aspect of having access to resources at all times. The participants showed in their survey results as well as in the focus groups that this was one of the best things in their opinion of using a computer in class and being able to take it home. During one focus group a student stated "I like that I don't always have to take notes, I can just look back at Canvas later" (student, personal communication, October 20, 2015). Another student in a different focus group was confident to say "I enjoy that you can turn your work in as soon as you finish while you are at home" (student, personal communication, October 19, 2015). This theme aligns with the prediction that accessibility of resources at all times is a necessary component of a successful blended learning environment.

The second theme of organization of materials is one that many students noted on the surveys as being beneficial, but was not talked about as frequently in the focus group sessions. Students enjoyed that they were able to use a computer to keep all of their assignments organized in folders and not in binders or notebooks. One student shared "Instead of writing on papers that rip and can be lost we can type and save things on word documents" (student, personal communication, October 15, 2015). Within the Learning Management System (LMS) Canvas, many students noted that they like the way assignments and resources are organized in modules. "The modules are a neat way to help me find the stuff form class" stated one student and added that she enjoyed being able to see all the topics they would be covering and the order they would be in because of the modules (student, personal communication, October 21, 2016).

Another positive aspect of the blended learning environment that participants stated was beneficial in preparing them for assignments and assessments was the feedback available. By using the computers to submit most assignments and record grades, students are able to easily note what they have turned in or not turned in as well as see feedback on assignments and assessments through comments and numerical scores. As one student explained, "Using Canvas on the computer is helpful to me and many others. It helps me be on track and know what I miss and need to turn in. Also to know what score I have, grades" specified one student during a focus group and was quickly backed up by the others in the group (student, personal communication, October 16, 2015). When asked to expand on this notion, another student in the same group responded "I like how our teacher can talk to us through both the computer and in person to tell us what we did right or wrong on something" (personal communication, October 16, 2015).

The final theme that emerged from the results was the interaction students were able to have with their peers and the teacher. While they did not want to give up class discussions and group work, they appreciated that they could continue and expand on what they started at school beyond the classroom. "I really like working in a group in the computer, and on paper" argued one student while another added "Having group projects and group work is my favorite thing about blended learning because we can start working in class and keep working together on the computer at home if we need to" (students, personal communication, October 13, 2015). While it was predicted that students would mainly enjoy online discussions so they would not have to share out in front of their peers, the opposite seemed to shine through in the surveys and focus groups. One student stated that "I prefer to do discussions in person so I can talk to the people around me and not just type" (student, personal communication, October 14, 2015). Online discussions are beneficial in evoking a response from every child, yet the students prefer to be

able to respond to each other in class and have a smooth flow in the conversation than have to wait and see what everybody else typed.

Discussion

The results of this study are consistent with that of other students in the same school, but are limited because the population studied all have access to 1:1 devices that they are allowed to take home and all share the same teachers. Of the participants involved in the study, only 12% do not have access to the Internet outside of school. A variety of teachers and schools would allow the results to be generalized beyond this school. Access to a LMS such as Canvas is another limitation in this study. While a blended learning classroom typically involves access to computers or another type of device connected to the Internet, the additional role of the LMS is unclear at this school. Students might have focused on the benefits and aspects they find beneficial of the particular LMS and not the blended learning environment itself. The LMS provides an easy to follow organization and structure for blended learning, but it is not clear if this is a necessary component to an effective blended learning environment. During the interviews, several groups commented on what they enjoyed specifically about the LMS used and the interviewer had to continuously clarify if this was just about Canvas or the online portion of the learning. These results are consistent with those of Gecer & Dag (2012) who also noted that students commented frequently on the organizational features that they liked offered by the use of an LMS rather than the blended learning experience in general. Experimental design studies could be used to make a clearer distinction if the LMS plays a significant role in the perceptions or success of students in a blended learning environment.

Implications

The results of this study show that the accessibility of resources online, ability to constantly communicate with the teacher outside of class, and in-person discussions were some of the aspects of online and face-to-face learning that middle school students deem beneficial when preparing for assignments and assessments. It is recommended that these aspects be incorporated into all blended learning classrooms in some form or fashion. One implication of the findings is that middle school teachers need to be aware of what is available to their students in a blended learning environment and continue to strive for a balance between online instruction and face-to-face instruction. The students commented in the interviews that they did not enjoy having to get all of their knowledge from staring at a computer screen all day, but they also did not wish to go back to the "traditional" style classroom where they were not permitted to use technology in the learning process.

Future Research

Future studies should focus on what sub-populations such as special education, English Language Learners, and gifted students find most beneficial in the blended learning environment because they were not included in this study. The current body of research for blended learning leans towards perceptions and qualitative studies rather than quantitative studies. It would also be beneficial for studies to explore the academic performance differences in students who were exposed to quality blended learning experiences versus those who were in traditional classrooms each day. Experimental design studies should be conducted in all grade levels to determine if there is an age or grade where results differ. Research focused on different grade levels utilizing a blended learning approach is a broad area where new research needs to be done. As an extension of this study, the role that an available LMS plays in an effective blended learning

environment needs to be analyzed. Does blended learning require an LMS or are there other

ways to achieve an effective blend of online and face-to-face instruction?

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Appendix A

Online Survey Questions

1. How many classes have you had that use a blend of online and face-to-face instruction?

2. How has blended learning affected you as a student?

3. Do you enjoy having a blended learning classroom over a traditional classroom?

4. How do you feel about having a blended learning classroom?

5. What would you change about the blended learning classroom?

6. What parts of the blended learning classroom do you enjoy?

7. What parts of the blended learning classroom do you not enjoy?

8. What parts of the online learning helps you prepare for daily assignments?

9. What parts of the face-to-face learning helps you prepare for daily assignment?

10. What parts of the online learning helps prepare you for tests and quizzes?

11. What parts of the face-to-face learning helps you prepare for tests and quizzes?

Appendix B

Interview Protocol for Focus Groups

Time of Interview:

Date:

Location:

Interviewer:

Focus Group Members:

Questions:

1. Tell me about you as a student.

2. How would you describe blended learning?

3. Tell me about your experiences with blended learning.

4. Tell me about your favorite experiences with blended learning. Why were these your favorites?

5. Tell me about your least favorite experiences with blended learning. Why were these your least favorite.

6. What do you like best about face-to-face learning? Why?

7. What do you like most about online learning? Why?

8. What do you think helps prepare you for assignments and tests the most? Why?

9. If you could pick one thing about blended learning that you think all your teachers should

know or do, what would it be?