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Accommodating Students Different Learning Styles with the use of Technology

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Senior Capstone
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Abstract

The understanding of different learning styles is crucial for student academic success. The area of concentration pertaining to this topic includes the cognitive development during the adolescent age group selected. To create a good academic foundation, the teacher must exhibit different forms of learning styles to the students to create awareness and a good academic foundation. With the mass inclusion of technology in our society and education system, this research will attempt to understand the positive and negative effects of technology on effecting the students' ability to use their effective learning style. Through the use of literature reviews and interviews with three teachers, this senior capstone examines the availability and access to technology and the effects of incorporating technology in the classroom to accommodate the students' different learning styles.

Accommodating Students Different Learning Styles with the use of Technology

Establishing the knowledge of different learning style became a developing topic of interest when I entered college. All through elementary school, middle school and high school, I struggled with academics. I didn't understand why some of my friends could read the chapter and ace the test and I would do the same and fail the exact same test. It wasn't until college did I realize that everyone has a different learning styles. Understanding of different learning styles is crucial for students academic success. Learning styles can improve the learning techniques to create a good academic foundation. In addition, the teacher plays a crucial role in understanding and adapting to different learning styles (Rolfe & Cheek, 2012). I am interested in learning about the different types of learning styles and how public schools accommodate to each student's different learning styles. This generation of students are enveloped will be researching the effects of incorporating technology in the modern elementary school to accommodate students' different learning styles.

The focus of this paper is to examine how teachers accommodate to students' different learning styles through the use of technology. It is important while students are developing cognitively, they establish a form of learning style that will help them learn in higher education and beyond. During adolescences, the student undergoes many biological, physical and cognitive development changes. Therefore, this is the time the student is in a great stage of change and develops an understanding of his or her individual learning style that will help them develop a sense of one's self. Establishing a specific learning style will not only help the student achieve

academically, but it will also help in the career field as well.

Our education system has greatly integrated the use of technology into every day curriculum. The aspect of technology can be a pro or a con for some students with different learning styles. Depending on the teaching style, the teacher chose for the specific lesson. Some students may fall behind due to the different learning styles while trying to learn new information. This negative aspect can also have positive outcomes because it challenges the student to learn how to adjust to a different learning style. If this process is enforced too early, it can have a negative effect on a student slipping through the cracks within the education system due to the major learning styles because it surpasses their learning style ability.

Establishing these skills early on will accommodate to the individual learning while infusing technology into their education system. Technology may have a mass amount of positive outcomes for the educational aspect, but at the same time, it may decrease their reading and writing skills as well.

The primary research question is; *How can technology accommodate to students with different learning styles?* I would like to research the effects of incorporating technology in the modern elementary school to accommodate students' different learning styles. The secondary research questions are: *What is learning style? Are there different learning styles? If so, what are the different learning styles?* I think it is important to have a general understanding of the basic seven learning styles; visual, logical, verbal, physical, aural, social and solitary. Each learning style has different characteristics and it is important to put those characters into perspective of the students

on how they process information and produce their understanding. *What does research say about the characteristics of students with different learning styles? How do students learn with each of learning style? How can technology accommodate to the students with different learning styles?* The next step is to analyze how teachers normally teach in the regular classroom. Versus how teachers accommodate to students with different learning styles. In turn, the next question poses a greater concern for the student; *How do teachers normally teach in the regular classroom? How do students with different learning styles react to the regular teaching style of the teachers? How do teachers accommodate to the students with different learning styles to maximize their learning in the classrooms through the use of technology?* Considering our education system has greatly integrated the use of technology into every day curriculum, technology can be a pro or a con for some students with different learning styles, *What are the different types of technology resources that are available for teachers to accommodate students with different learning styles?* These questions will help create a knowledgeable foundation for the intended audience, and help shape my method and research to receive the proper final product of my project.

Literature Review

This particular topic of study has many routes of investigation. Many of the articles obtained in this research were pertaining to the teacher's ability to choose the best-fit learning system that will accommodate to the students' learning ability and learning style (Kuo et al, 2013). The process in which the *Journal of Education Technology & Society* used to identify those learning issues by using two educational games that focused on the developing skill of

learning styles. To begin identifying and investigating your personal learning style, the adolescent must first cognitively adapt to a different way of learning. Adaptive learning according to the study Hwang et.al. (2014), state that the students who learned their specific learning style, performed significantly better academically.

While understanding the concepts of general learning styles is a great way to consume a good foundation, it is also important to understand the diverse nature of our growing student population (Haar, Hall, Schoepp &Smith, 2002). The accountability of teachers accommodating to the students' needs in every lesson is very important. Haar and her colleagues' (2002) main goal was to understand how teachers accommodate to different learning styles. By this study they used these main questions to find their results; "How teachers talk about their students different learning styles?" "How teachers respond to their students different learning styles?" and lastly "Why teachers respond to their students' different learning styles?" Their findings after interviewing eight K-12 teachers, "By getting into the habit of reflecting on their teaching and on their students' learning, the teachers had developed a means of almost automatically doing what is considered "good teaching." They utilized whatever strategy, technique, or method was needed to ensure that their students were learning." (p.16).

Educational focused technology provides many skills in which the online source acts as a scaffolding agent. Scaffolding has proven to support teaching and learning practices in the education system. Sharma and Hannafin (2007) discuss in their article about the various scaffolding processes that technology can offer and which worked best, according to their study.

The results of their study decided that scaffolding can properly assist the students to understand by focusing on their zone of proximal development. Technology acts as a teacher or tutor that would implement these scaffolding techniques into their lessons to better assist the students learning. Sharma and Hannafin (2007) stated, "Scaffolds may provide opportunities for students to deepen their understanding by externalizing and comparing their knowledge and beliefs with those of peers and experts. To engender appropriate use, scaffold design needs to be consistent with learners' understanding and cognitive development. Early evaluation of scaffold design using a learner-centered design process can reduce the possibility of unintended interpretations of a scaffold's intent" (p.43).

Analyzing the different types of learning styles, this next study incorporates basic problem solving skills into the classroom technology. The main goal of this study was to analyze how students go about solving real world problems through the ever-growing technology field. Kim & Hannifin (2010), created a technology- enhanced learning environment in the classroom experiment. The incorporation of scaffolding techniques have grown rapidly through the world of math and science. In this program, the idea of scaffolding has grown to a wide range of options. Therefore, the researcher has experimented with incorporating scaffolding into the real world problems. The main examination of this study was to include a framework that includes problem solving and scaffolding to help to create a problem solving solution for the students to acquire better skills in real world problem solving.

As we focus more on the scaffolding technique, teachers or tutors may miss the students'

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success in learning. Puntambekar & Hubscher (2006) state the purpose of their research, "This article discusses how to implement these critical features of scaffolding in tools, resources, and curricula. The most important topic Puntambekar and Hubscher (2006) touched on in their article, is suggested that if tools are designed based on the multiple levels of the student understanding found in a classroom (p.1). Palincsar (1999) pointed out, "scaffolding is a very accessible metaphor because it is flexible and it captures multiple dimensions of teaching and learning" (p.10). The teacher must always engage in the students' understanding of the topic, and the technology aspect of this project proved the excellence in which teachers can now access that information and quickly adjust in any way the student may need to cautiously not overlap the zone of proximal development (Puntambekar and Hubscher, 2006).

As students are developing cognitively, learning new ideas and skills are the main goal of their educational career. Incorporating technology into the curriculum not only benefits the students with new ways of learning the topic at hand, but technology also assists the student to learn new skills they may acquire by learning how to use technology programs. The study by Viorica-Torii and Carmen (2013) examined how students adapt to using technology and how to adapt to difficulty of learning a new learning style or concept. The outcome was very positive with how the students adapted to different forms of technology and difficult concepts (Viorica-Torii and Carmen, 2013).

In conclusion to the literature research section, the studies previously experimented regarding the topic of incorporating technology into the everyday classroom, and how

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technology accommodates to each individual student's learning style. These studies had a wide array of academic subjects, age levels and techniques that proved technology greatly accommodates the students individual learning style with the use of scaffolding. The next section, Method and Procedure will cover the steps in which I used to research my topic of interest.

Method and Procedures

The method and procedures involved Literature reviews and interviewing three 8th grade teachers from two schools. These three interviews took place at Tenaya Elementary School in Groveland, California (See Appendix A) and San Benancio Middle School in Salinas, California (See Appendix B). Both schools are an average sized middle school with an up to date and very well-manicured campus'. The students at both of these schools are predominantly Caucasian as well as Hispanic. The main focus of this research is to interview teachers on their teaching styles and how they accommodate to their students different learning styles with the use of technology. Considering the two schools involved and the three different teachers with very different concepts of how to teach to their students, the outcomes will vary.

Results, Findings and Discussion

The method in which I researched my primary and secondary research questions progressed in three teacher interviews and large literature review. These three interviews took place at Tenaya Elementary School in Groveland, California (See Appendix A) and San

Benancio Middle School in Salinas, California (See Appendix B). Mrs. Hawkins, a history

teacher for 8th grade students at Tenaya Elementary School (K-8th grade) has been teaching for

30 years. Ms. Beal and Mrs. Lee, from San Benancio Middle School, both 8th grade teachers at

San Benancio Middle School. Mrs. Beal has been teacher for 5 years, teaching 8th grade

Grammar and Literature. Mrs. Lee has been teacher for 12 years, teaching 7th grade literature

and 8th grade History and Literature. This section will include my primary and secondary

research questions with the evidence found in my personal interviews and literature review.

The primary research question is; *How can technology accommodate to students with*

different learning styles? The research will include the effects of incorporating technology in the

modern elementary school to accommodate students' different learning styles. The secondary

research questions are 1. *What is learning style? Are there different learning styles? If so, what are the*

different learning styles? I think it is important to have a general understanding of the basic seven

learning styles, visual, logical, verbal, physical, aural, social and solitary. Each learning style has

different characteristics and it is important to put those characters into perspective of the students

on how they process information and produce their understanding. 2. *What does research say about*

the characteristics of students with different learning styles? How do students learn with each of learning

style? How can technology accommodate to the students with different learning styles? The next step is

to analyze how teachers normally teach in the regular classroom. Versus how teachers

accommodate to students with different learning styles. In turn, the next question poses a greater

concern for the student; 3. *How do teachers normally teach in the regular classroom? How do students*

with different learning styles react to the regular teaching style of the teachers? 4. *How do teachers accommodate to the students with different learning styles to maximize their learning in the classrooms through the use of technology?* Considering our education system has greatly integrated the use of technology into every day curriculum, technology can be a pro or a con for some students with different learning styles; 5. *What are the different types of technology resources that are available for teachers to accommodate students with different learning styles?* These questions will help create a knowledgeable foundation for the intended audience, and help shape my method and research to receive the proper final product of my project.

The education system has greatly integrated the use of technology into every day curriculum, technology can be a pro or a con for some students with different learning styles. The primary research question follows; *How can technology accommodate to students with different learning styles?* The technology availability at Tenaya Elementary school and San Benancio Middle School is limited. The school owns about 20 iPads and has an accessible computer room; therefore, the teachers created a system in which each class will reserve the iPads for a certain amount of time, (X) amount of days per week and schedule computer lab hours. The access to these technology resources may be limited, but it still an advantage of obtaining iPad at all is a great opportunity for Tenaya Elementary School and San Benancio. Tenaya Elementary School and San Benancio Middle school have adapted numerous educational websites and applications that have helped their students excel academically. For example, the program "Front Row" is designed to help students excel at their own individual level of learning in Mathematics and Language Arts to

help their students develop real world concepts and skills. In addition, Mrs. Hawkins, from Tenaya Elementary School, noted that the growing technology field in our economic society, by using technology at a younger age has helped prep her students to become proficient at technology assignments and programs and for future education and beyond. Mrs. Lee, from San Benancio Middle School, believes students are more successful when they are working with technology. Technology helps her students to stay focused and motivated, and the access to information is incredibly helpful with her students. Ms. Beal, from San Benancio Middle School, believes that technology allows the student to discover their niche, movie clips, graphic design/ not totally English but it something they can feel accomplished or confident in and excel from there.

1. *What is learning style? Are there different learning styles? If so, what are the different learning styles?*

   Griffin & Fleet (2014) discusses what learning styles are from their Management Skills book, "Learning style refers to the ways you prefer to approach new information. Each of us learns and processes information in our own special style, although we share some learning patterns, preferences, and approaches. Knowing your own style also can help you to realize that other people may approach the same situation in a different way from your own" (p.28). All three of the interviewed teachers believe it is important to have a general understanding of the seven learning styles, visual, logical, verbal, physical, aural, social and solitary. As explained in the seven major learning styles website, each learning style has different characteristics and it is

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important to put those characters into perspective of the students on how they process information and produce their understanding. For example, visual learners prefer to use pictures, mind maps, or videos to understand data. As for people with the physical learning style, they learn by doing, for example, to use their body to learn, drawing, using physical objects or role-playing to understand data. Aural learning style is for a person that prefers to listen to content like music, lecture, or recordings. The verbal learning style is to perform writing or speaking to assist their learning. The logical learning style uses reasoning and systems like math to understand data. The last two learning styles are, social and solitary. The learning preference of the student regarding to collaborate with other people or to work alone in solitary confinement.

2. *What does research say about the characteristics of students with different learning styles? How do students learn with each of learning style? How can technology accommodate to the students with different learning styles?*

The research states that while understanding the concepts of general learning styles is a great way to consume a good foundation, it is also important to understand the diverse nature of our growing student population (Haar, Hall, Schoepp &Smith, 2002). The student is in a growing state of mind by expanding their learning horizons. The student is constantly learning new ways of how to learn by exercising their weaknesses. The interviewed teachers for this project all stated that they are currently working on exercising the students skills with note taking by

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verbally giving a lecture and offering power point notes as well. The teachers stated by the end

of the school year, they would eventually decrease the amount of visual notes from the power

point and mainly focusing on the students skills in their aural learning style by the lecture alone.

The technology provided in these lessons include, a Doc Cam where the teacher teaches the

students how to take notes on their paper, as well as a Smart Board to project the intended notes

for the Power Point from the computer.

3. *How do teachers normally teach in the regular classroom? How do students with different*

   learning styles react to the regular teaching style of the teachers?

The accountability of teachers accommodating to the students' needs in every lesson is very

important. Haar and her colleagues' (2002) main goal was to understand how teachers

accommodate to different learning styles. The three teachers interviewed stated their lesson plans

are to be directed towards the students weakness of aural lessons provided with visuals of a

Power Point of enhance note-taking skills in the seventh and eighth grade.

Mrs. Hawkins learned in her first year of teaching how incredibly important

incorporating different learning styles can be to help students succeed academically. The other

strategy Mrs. Hawkins likes to use is testing her students on which learning style they best

acclaim to. Then, she proceeds to work on learning styles they may struggle with, for example,

listening and regurgitating the information back on to paper. Her idea of strengthening her

student's weaknesses will help her students feel more confident in higher education when the

process of teaching may be limited. Mrs. Hawkins believes technology has become an extremely valuable tool for the education world. Technology has helped her students with learning note taking by a visual aspect to a much greater extent at an earlier age.

To begin identifying and investigating your personal learning style, the adolescent must first cognitively adapt to a different way of learning. Adaptive learning according to the study Hwang et.al. (2014), state that the students who learned their specific learning style, performed significantly better academically. Mrs. Lee spoke briefly about her learning styles; she most identifies with a visual learning as well as kinesthetic by writing the material down. She prefers visuals, for example, Power point with picture and words backs up her lecture. While lecturing history the power point slides incorporating seeing text and writing everything exactly, they can't paraphrase or summarize yet. By the end of the year she works towards decreasing the power point slides to strength the skill of listening to writing exactly. If the student struggles, she will provide the student with outlines if they struggle with the writing process of notes to help them adjust to the new learning style

Mrs. Beale stated she gave a learning style quiz at the beginning of the school year and that quiz gave awareness to each students different learning style, to the teachers and to the student. The teacher then can assist the student if students can't advocate for themselves when they don't understand the material. Her students are currently struggling with bridging information from what they hear to writing it down on paper. Therefore, she has been working with her student to strengthen this weakness. Generally, she tries to incorporate all the different

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learning styles each lesson plan or one-on-one sessions with her students. Her main goal is to always adjust to each student and who they are THAT day.

4. *How do teachers accommodate to the students with different learning styles to maximize their learning in the classrooms through the use of technology?*

The teacher must always engage in the students' understanding of the topic, and the technology proves the excellence in which teachers can now access that information and quickly adjust in any way the student may need to cautiously not overlap the zone of proximal development (Puntambekar and Hubscher, 2006).

If the student is struggling, Mrs. Lee will provide the student with outlines if they struggle with the writing process of notes to help them adjust to the new learning style. Mrs. Lee is always ready to adjust to each student and who the students are THAT day. Mrs. Lee also tries to incorporate artwork and videos, which provides the students with a different style of visuals. She tries to do activities pertaining to her lesson that hit all learning styles. Mrs. Lee is currently in a unit of drawing notes; the student provides visuals. If the student can draw something, they understand every aspect of it or they learn during the process. Mrs. Lee just finished a section of her teaching allowing the students work in groups to create a research paper into a power point and allowing the students to provide their own visuals.

Mrs. Beal prefers to gives her students the opportunity to discuss what they have learned and what they are struggling with to understand. Group work allows gives her students that are at different learning levels to work with other students to understand the material or regurgitate the

information into their own "middle school language" to transform the new found information can be transformed into the language the teacher hopes they will learn. When her class is working on review of anything, working in groups or moving around the room playing games of four corners to exercise history knowledge.

Technology has provided a different aspect of learning that does not require the teachers' assistance. Incorporating technology into the curriculum not only benefits the students with new ways of learning the topic at hand, but technology also assists the student to learn new skills they may acquire by learning how to use technology programs (Viorica-Torii and Carmen, 2013). Technology integrates scaffolding into the academic lessons in which the student is offered a different form of the question or reasoning to better assist the students' learning. Sharma and Hannafin (2007) discuss in their article about the various scaffolding processes that technology can offer in which worked best, according to their study. The results of their study decided that scaffolding could properly assist the students to understand by focusing on their zone of proximal development

5. *What are the different types of technology resources that are available for teachers to accommodate students with different learning styles?*

The different types of technology discussed in the teacher interviews were Doc Cameras, Power Point program, computer with online access, iPads and educational programs or applications. Technology acts as a teacher or tutor that implements scaffolding techniques into their lessons to assist the students learning. Sharma and Hannafin (2007) stated, "Scaffolds may

provide opportunities for students to deepen their understanding by externalizing and comparing their knowledge and beliefs with those of peers and experts." For example; if the student is working on the "Front Row" application used by Mrs. Hawkins, and the student becomes stuck on a certain math equation, the application with then offer a scaffold of different explanations to better assist the student in a time of need.

I spoke with Mrs. Hawkins about her personal views of technology in the education aspect and in the non-education aspect. Mrs. Hawkins believes technology is extremely valuable for the education world. Technology has helped her students with learning note taking by a visual aspect to a much greater extent at an earlier age. In addition, Mrs. Hawkins noted that the growing technology field in our economic society, by using technology at a younger age has helped prep her students to become proficient at technology assignments and programs and for future education and beyond. For example, the program "Front Row" the educational application provided on the iPad, is designed to help students excel at their own individual level of learning in Mathematics and Language Arts.

Ms. Beal, from San Benancio Middle School, believes that technology allows the student to discover their niche, by creating movie clips or graphic design to convey their ideas. By providing the students with the opportunity to be creative and free of regulations, they can feel accomplished and confident in themselves and excel from there.

Discussion

To summarize the information provided in the teacher interviews, all three teachers described the pros and cons of incorporating technology into their curriculum. Mrs. Hawkins an 8th grade teacher at Tenaya Elementary school gave great examples of how she incorporates technology into her weekly lesson plans and how technology assists the student in their learning. Technology in her classroom consists of individual iPads twice a week. The educational program "Front Row" was most recommended by Mrs. Hawkins. The Front Row program has evolved to scaffold their lessons to each students needs and show progress of learning. All three teachers spoke about incorporating technology into their lectures to increase the note taking skills of the students. The main negative aspects of technology that all three teachers discussed were increased texting grammar by shrinking everything down, words and sentence structure. Texting has completely diminished the art of grammar and writing skills within their students. The other negative aspect of technology involves the lower attention span of the students. Therefore, the teachers must create a faster paced lesson plan to grasp enough attention to teach their lesson.

Limitations

My initial goal for this project was to interview five teachers and construct an anonymous survey and distribute those surveys to three classrooms. The goal of this anonymous survey was to grasp a better understanding of how the students react to the teacher's instruction and to assess each student's learning style. The limitations of this study involved the lack of communication

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and responses from experienced teachers. The lack of time remaining in the semester was a big

contributor to my limitations to this project. Therefore, I was only able to interview three

teachers. Considering the last minute responses from teachers to interview, the anonymous

survey was too complicated to construct with such little amount of time.

In addition, the lack availability of resources regarding my literature review on the

specific topic of learning styles involving technology. The amount of studies previously

reviewed on this specific topic pertaining to the adolescent age group is bare to none. During

these interviews at Tenaya Elementary School and San Benancio Middle School, the differing

levels of financial impact for technology availability in each classroom. Tenaya Elementary

School has access to 20 iPads, and those iPads are distributed to classrooms in which teachers

sign up to use during their class time. San Benancio Middle School's funding is distributed into

different departments, in which the students have full access to a computer lab in which the class

can visit for technology lesson plans.

Recommendation

Pertaining to my topic of interest, accommodating to students different learning styles

with the use of technology, my personal recommendation for teachers would be first to assess

their students at the beginning of the year to analyze their strengths and weaknesses. During the

stage of middle school, the students are progressing their skills to become efficient high school

students. From my personal interview with Mrs. Hawkins, she mentioned in her classroom, she

likes to use different types of technology in her lesson plan that the students have a certain

strength in. She also likes to use different types of lessons to help strengthen their weaker

learning style. She gave an example of note taking; being able to listen to a lecture and take

efficient notes is something her students this year are focusing on to better develop their skills for

high school (See Appendix A). Not only does it help to understand your student's strengths and

weaknesses during their developing stage, but it also helps the teacher to better understand their

students on a more personal level. The learning environment is crucial for the student to feel

comfortable and safe to have a good learning experience. The different programs offered on a

technology resources have developed a wide array of options for students to expand their

horizons without the shame of failing. The last recommendation I would make for teachers,

would be to sort through the different types of programs to test what will work well with their

students. This process is all about understanding every student on a different level to

accommodate to their specific learning style to ensure academic success.

Conclusion

Understanding of different learning styles is crucial for student academic success. The

area of concentration pertaining to this topic includes the cognitive development during the

adolescent age group selected. To create a good academic foundation, the teacher must exhibit

different forms of learning styles to the students to create awareness and a good academic

foundation. In conclusion, to the evidence found in the literature review and experimental

interviews, the importance of acknowledging a students' learning style perceives as highly

important for that particular student to thrive in higher education and beyond to his or her career

standing.

Pertaining to the teacher interviews regarding the primary research question; *How can technology accommodate to students with different learning styles?* Each teacher responded with different forms of technology programs they personally use in their lesson plans with their students. The most common negative aspect regarding to technology in the classroom were the texting grammar and lower attention span among the students. Although there may be negative aspects to incorporating technology into the curriculum, the positive outcomes are most important in this project. The student experiences different forms of scaffolding to adjust to the students needs and records the students progress in a timely manner. Therefore, the learning experience is fast paced and more effective for the individual student. In conclusion, this project was effective in the findings that technology proves to be an effective way for teachers to incorporate into their curriculum to accommodate to students with different learning styles.

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Appendix A
Mrs. Hawkins Interview Questions and Answers: 10/25/2016

Preface Question: How long have you been teaching? What do you teach now?

Mrs. Hawkins has been teaching for 30 years and teaches 7th and 8th grade History and

Language Arts.

1) In your opinion, how does your teaching style accommodate to your students different

learning styles?

Mrs. H: major key point of including all learning styles as much as possible.

Example: student reading a small passage from the history text book aloud to the class.

Will limit the reading to a small passage. Once the student is done reading, each student will pair

up with another student and discuss the content. Then will give an example of how to summarize

the passage, while exercising the skill of listening and taking physical notes in their note book.

With this lesson plan she uses her Document Camera that projects up on to a white board. She

uses this to display the text book and her form of writing useful notes.

2) What have you learned in your career about learning styles pertaining to your success as a

teacher?

Mrs. H: learned in first year of teaching how incredibly important incorporating different

learning styles can be to help students succeed academically. The other strategy likes to use is

testing her students on which learning style they best acclaim to. Then she proceeds to work on

learning styles they may struggle with, for example, listening and regurgitating the information back on to paper. Her idea of strengthening her student's weaknesses will help her students feel more confident in higher education when the process of teaching may be limited.

3)When planning a new lesson plan, do you take into consideration your students different learning styles? if so, how?

Mrs.H: Yes, she tries to come prepared for every learning style for every lesson plan.

4) Do you make time during the school day to exercise different learning styles? If so, how?

Mrs.H: sets aside time to let students work on iPad on Front Roe website to let students work on their work at their own level.

5) How do your students with different learning styles react to your regular teaching style? (Examples)

Mrs.H: tries to incorporate each learning style to help each student succeed. Also likes to work on learning styles her students may struggle with.

6) In your opinion, how can technology accommodate to the students with different learning styles?

Mrs.H: Technology has provided the advantage for students to work on aspects of their work at their own pace without judgment.

7)How do you, as the teacher, accommodate to the students with different learning styles to maximize their learning in the classrooms through the use of technology?

Mrs.H: Technology has provided the advantage for students to work on aspects of their work at their own pace without judgment.

8) What are the different types technology resources that are available for teachers to accommodate students with different learning styles?

Mrs.H: our school predominantly uses the Front Row Website as well as Google Classroom.

9) In your opinion, does technology help assist your students in their different learning styles?

Yes, Technology motivates students in many aspects of the classroom and gives them a sense of confidence and sense of responsibility.

10) What is your opinion on technology, Educational and Social?

Personal views of technology in the education aspect and in the non-education aspect. Mrs. Hawkins believes technology is extremely valuable for the education world. Technology has helped her students with learning note taking by a visual aspect to a much greater extent at an earlier age. In addition, Mrs. Hawkins noted that the growing technology field in our economic society, by using technology at a younger age has helped prep her students to become proficient at technology assignments and programs and for future education and beyond.

The negative aspects of technology almost out-weighed the positive in Mrs. Hawkins opinion. Although she mentioned the great strides toward making technology more education friendly, once the students leave the school campus, they are bombarded with social media and mindless video games. Mrs. Hawkins stated that these students do not go home to read a book, or experience nature or art, these students go home and become numb in front of a technology device. The main point Mrs. Hawkins stated about these mindless video games, isthat they are training our young minds that if they aren't getting rewarded instantly, the child will lose motivation and transfer their focus to something that will reward them. Mrs. Hawkins noticed this behavior in her classroom, if a student fails or becomes uninterested in some task they will move their focus to something that will, just like their mindless video games. Therefore, Mrs. Hawkins has had to try to redirect her lesson plans around this new found logic of these teenagers in order to keep their attention to her educational lessons.

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Appendix B
Ms. Beal & Mrs. Lee Group Interview Questions and Answers: 11/1/2016

Preface Question: How long have you been teaching? What do you teach now?

-Ms. Beal (Ms. B) has been teacher for 5 years, teaching 8th grade Grammar and Literature.

-Mrs. Lee (Mrs. L) has been teacher for 12 years, teaching 7th and 8th grade Literature and 8th

grade History.

1) In your opinion, how does your teaching style accommodate to your students different

learning styles?

Mrs. L: prefers visuals/ Power point with picture and words backs up her lecture, she is a visual

learner. Incorporates videos which provides the students with a different style of visuals.

Ms. B: Likes to do group work with her students. The students have an opportunity to discuss

what they have learned and what they are struggling with to understand. Gives students that are

at different learning levels to work with other students to understand the material or regurgitate

the information into their own "middle school language" to transform the new found information

can be transformed into the language the teacher hopes they will learn.

2) What have you learned in your career about learning styles pertaining to your success as a

teacher?

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Mrs. L: Two learning styles, auditory and kinesthetic by writing the material down. Tries to do an activity that hits all learning styles. While lecturing history the power point slides incorporating seeing text and writing everything exactly, they can't paraphrase or summarize yet. By the end of the year she works towards decreasing the power point slides to strength the skill of listening to writing exactly.

Ms. B: Being aware of learning styles in general. Very much an auditory learner. Verbalize everything she does in the classroom. Tries to incorporate her own learning styles with her students, but also appeal to all learning styles as well. Biggest challenge of this age group is listening to what is being said and writing it down on paper.

Students this year struggle with bridging information from what they hear to writing it down on paper. Listening and writing takes a lot of time for the students to process that information.

Gave learning style test and gave awareness to each students' different learning style, the student then advocates for themselves when they don't understand the material.

3)When planning a new lesson plan, do you take into consideration your students different learning styles? if so, how?

Mrs. L: power points incorporates listening and writing. Provide students with outlines if they

struggle with the writing process of notes to help them adjust to the new learning style.

Ms. B: All different learning styles lined up for each lesson plan. Always adjust to each student and who they are THAT day.

4) Do you make time during the school day to exercise different learning styles? If so, how?

Mrs. L: A lot of artistic projects

Ms. B: Review of anything, working in groups or moving around the room playing games of four corners if they believe this or that to exercise history knowledge.

Currently in a unit of drawing notes, the student provides visuals. If the student can draw something they understand it.

5) How do your students with different learning styles react to your regular teaching style? (Examples)

Mrs. L: If a student struggles to what we teach regularly we adjust to what works best for them.

Ms. B: (Agreed above) Always adjust to each student and who they are THAT day.

6) In your opinion, how can technology accommodate to the students with different learning

styles?

Mrs. L:Chrome Booklets- Groups create a research project into slides

Ms. B: Chrome Booklets- technology allows the student to discover their niche, movie clips, graphic design/ not totally English but it something they can feel accomplished or confident in and excel from there.

7)How do you, as the teacher, accommodate to the students with different learning styles to maximize their learning in the classrooms through the use of technology?

Mrs. L: Groups create a research project into slides

Ms. B: Provides students with the opportunity to work on their disabilities. technology allows the student to discover their niche, movie clips, graphic design/ not totally English but it something they can feel accomplished or confident in and excel from there.

8) What are the different types technology resources that are available for teachers to accommodate students with different learning styles?

Mrs. L: Apps or websites used in the classroom; Docery/ i-excell, ED puzzle, Apple TV, Google Classroom.

Ms. B: Flipped Classroom- have student watch 5-8 minute video for homework come to class with the knowledge and you as the teacher do the activity around the knowledge they obtained through homework.

9) In your opinion, does technology help assist your students in their different learning styles?

Mrs. L: (agreed below) Students are more successful working with technology

Ms. B: 100% all different levels and anything you do on line can help a student with their specific struggle. As far as attention holding, the biggest struggle for teacher, access to technology is a competition. Keeping students focused, technology helps a lot.

10) In your opinion, how do you feel about the pros and cons of technology in Education?

Mrs. L:Violent video games are a negative. Social side of technology, texting has completely diminished the written ability and the grammar to "texting language"- shrinking everything down, words, sentence structure. Access to information is amazing.

Ms. B: Positive change, in the education world. The social technology, video games, cell phone, takes a way time at home from reading, studying, working out issues. Homework assignments all through technology. 7-10 min attention span because of technology. Kids that don't have access to it at home has been a challenge because SO much homework is on line.