Helping Students with Disabilities Use Accessibility Features on the iPad

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Description of Capstone Experience

Westside Elementary School serves students in grades PK-5 and is located in Cedartown, Georgia. It is one of 6 elementary schools in the Polk County Schools. It is a Title 1 school which means that it has a high percentage of children from low income families. The school has a population of 587 students. There are 68 faculty and staff members. Westside Elementary School has a significant number of students who receive special education services at 9.2% of the school population. Westside houses three self-contained classrooms for students who have a moderate, severe, or profound disability. In addition to those self-contained special education classrooms there are students in each grade level who receive inclusion or resource special education services. For the 2016-2017 school year, Westside has been identified as a focus school. According to the Georgia Department of Education (n.d.) a focus school is a school that 1.) is a Title 1 school, 2.) has an identified achievement gap between its highest achieving subgroup and its lowest achieving subgroup, 3.) lowest 10%. Students with Special Needs have consistently fallen in the lower end of achievement on state standardized tests. The principal, Laura Little, has given permission to design and implement needed changes at Westside Elementary School.

There are many ways we can support students with disabilities inside and outside of the general education setting. This Capstone Project focuses on using the iPad to help students reach their highest individual potential. When Apple creates its product, they put huge amounts of research into accessibility features. Even after a product is launched, they continuously strive to to improve the accessibility features that are available to assist people with many types of disabilities. The iPad is no exception to Apple's commitment to creating new ways to allow

everyone to have access to their devices. Polk School District is a 1:1 iPad school district. We are

an Apple Distinguished Program. Even with the students and teachers of Polk School District

having access to the iPad's, we were not using them to their fullest potential, especially when it

came to students with disabilities. The candidate knew iPad has some great features available,

yet they were not being used. The candidate began to really research what all the iPad and

accessibility features could do and realized that there was far more that could be done with the

accessibility features than what she had previously realized.

Before the candidate started helping students learn how to use the accessibility features

that are available, she wanted to find out how teachers already feel about and use accessibility

features. She also wanted to survey the students with disabilities that will be using the

accessibility features to see what their attitudes toward technology were. The candidate began the

process by creating surveys for both teachers and students to complete. Once the surveys were

completed they were administered to students and teachers. The survey results from the teachers

gave me insight into how teachers use accessibility features in their classrooms. The survey

revealed that many teachers did not really know what accessibility features are. The survey also

reveled that the teachers who were aware of the accessibility features did not use them on a

regular basis with their students if at all. This survey also gave her an unexpected realization;

some teachers believed that by allowing students to use the accessibility feature they felt like

they were giving students an unfair advantage over other students. The student survey gave her

an insight into how students feel about using technology for learning. Students that participated

in the survey were very honest about their attitudes. Many students really like the use of

technology in their classrooms. Several students noted that they were very interested in learning

more about accessibility features to help meet their needs. None of the students surveyed were against using the iPad accessibility features.

The candidate also gathered and analyzed student achievement data for students who have already been identified and placed into Special Education. Reviewing this data revealed many places where students seemed to be struggling and as she reviewed the data she could see that allowing students to use accessibility features could help them in the classroom and in their daily lives. Many of the students have disabilities that impact their ability to read. From decoding to comprehension, reading is a fundamental part of classroom performance and life. Disabilities that impact a students ability to read affects them in every class. Many people think that struggling with reading only affects students in Reading and Language Arts. The truth is that students who struggle with reading also struggle with Math, Science, Social Studies, and other areas such as Music or P.E. All other subjects hinge on being able to read. The older students get, the more their school success depends on reading. The iPad has an accessibility feature called Speak Selection. This feature allows the user to highlight any text on the screen and have it read to them. This feature will be pivotal in this Capstone project. Other accessibility features will be used as well such as the invert colors feature, the text enlarge feature, the dictation feature and the guided access feature.

The next step of the process of this Capstone Project was to create and deliver a presentation about available accessibility features to the teachers at Westside Elementary School. The presentation was delivered through the weekly Professional Learning Communities (PLCs) that we have that meet by grade level. During the PLCs, many teachers expressed that they did not know about the accessibility features that were available. Some teachers expressed that they

knew about the accessibility features, but did not know to access them. The PLC setting allowed the candidate to educate teachers on the available accessibility features and on the reasons students need to use them. She was able to explain to the teachers at Westside why some students need the accessibility features and how they are not giving students an advantage by using them. They are "leveling the playing field" by allowing students with disabilities to use accessibility features to help in their weak areas.

Once the candidate had met with all the teachers and explain the purpose of the Capstone Project, she met with the other Special Education teachers to discuss what accessibility features they believed could help their students based on their disabilities. Next, she met with the students by grade level and discussed what accessibility features are and how they are used in age appropriate terms. She was able to talk with the students openly about their disabilities and how the accessibility features can help them. One thing that changed from the proposal is that the candidate had planned to talk with students in grade K-5, after careful consideration and thought, she decided not to discuss disabilities with students in grades K-2. The candidate did teach the identified students in grades K-2 to use the accessibility features. She just did not go into as much detail about the reasoning behind it.

On 2/3/16 students officially began using accessibility features in the classroom. The implementation period that was observed was for three months. The candidate was able to closely monitor the students on my caseload. Originally, she had planned to check in with the students after a month and a half. In the first week she had to do a lot more consulting with teachers and students than was initially planned. The candidate ended up talking with and coaching most of the inclusion teachers, all of the other special education teachers, and many of

the students on using accessibility features. She did not add this time to the Capstone Log because this was on an as needed basis and only a few minutes of her time. Over the course of 3/15/16, 3/16/16, and 3/17/16, she met with all students and teachers to determine what was working and was not working well with the implementation of using accessibility features. Many teachers reported little to no issues after implementation. Teachers were excited to see the progress that their special education students were making by using the accessibility features. Students were happy to be able to have access to the material in a way that had not previously been made available to them. On 4/27/16, 4/28/16, and 4/29/16, The candidate checked in with students and teachers again. Then, on 5/2/16, she administered post surveys to teachers and students to see how their feelings toward technology and accessibility features had changed. The candidate is pleased to say that for many teachers the use of accessibility features opened up a door to allowing students to use the accessibility features to help students to reach their highest ability. Students were excited to have access to the curriculum in ways they have not been able to before. Students are able to do things independently that they had always had to have help with before.

Once students had completed the three-month timeframe of implementing the use of accessibility features the candidate gathered and analyzed student achievement data again. Almost all students had made huge improvements in their grades, Lexile levels, and attitude toward school in general. For many students it gave them confidence and a way to be more independent in accomplishing tasks. The one student who had not made vast improvements is absent at least once a week, if not more. While the student did not show a decrease in achievement, he did not show an increase either. She arranged to meet with the principal to

discuss the findings and the positive effects the accessibility features had on the students with disabilities and their achievement.

The next step in completing her Capstone Project was to complete and submit an application to present about accessibility features, and the implementation at Westside, at a yearly technology professional development event hosted by Polk School District. Once the proposal was accepted, the candidate arranged to meet with her mentor who is a Mobile Minds Specialist (Instructional Technology Specialist). Together they brainstormed ideas on what information to present and how to present the information at the Mobile Minds University. Following the meeting, the candidate completed the presentation she intended to present at Mobile Minds University. She then met with the Polk School District Technology Coordinator as well as the other people who would be presenting at Mobile Minds University to preview and approve the presentation.

The presentations at Mobile Minds University made up the largest amount of time in the Capstone Project. This is the portion that allowed the candidate to present the information to other teachers within Polk School District and outside of it as well. Many educators from outside of the district also attend this event. She was able to share with educators just how important and effective the use of accessibility features were at Westside. Educators had the opportunity to see how they can support students with disabilities through the use of accessibility features on the iPad. Since all schools within Polk School District have 1:1 iPads, the use of accessibility features could be implemented with the current technology available with ease. Teachers that attended the sessions were surprised at the ways that their students with disabilities could receive support with the iPad accessibility features. Many administrators throughout the district also

attended. The candidate has been asked to do further training with 4/6 elementary schools, both middle schools, and one high school within Polk School District.

To follow up this Capstone Project the candidate will be continuing to implement the use of accessibility features within Westside. She will be scheduling the trainings at the other schools as soon as she gets the approval from her principal and Polk School Districts Central Office. The candidate will continue to encourage the use the accessibility features for students with disabilities in order to give them access to the curriculum.

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Results/Reflection

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This Capstone Project gave the candidate an opportunity to learn about technology facilitation with exceptional learners. She also was able to implement a way for technology to help students who have traditionally been overlooked or pushed to the side make gains and close the learning gap between students' disabilities and the curriculum. Students with disabilities can use the accessibility features to help in the areas they are weak in. The candidate developed the necessary leadership skills through this Capstone Project. Administrators, teachers, and students were under the direction of the candidate for the duration of the project and even beyond.

The candidate researched, recommended, and implemented strategies that can and will be sustained. She initiated the change process at Westside Elementary School for how students with disabilities access technology and the curriculum using technology. The candidate consulted best practices in the educational field that deal with students with disabilities and the use of technology. The candidate modeled and facilitated the design and implementation of technology-enhanced learning experiences making appropriate use of differentiation by using accessibility features on the iPad to differentiate the process and product at times.

Throughout the completion of this Capstone Project, the candidate effectively used digital tools and resources to systematically collect and analyze student achievement data, interpret results, communicate findings, and implement appropriate interventions to improve instructional practice and maximize student learning. The candidate gathered and analyzed the available student achievement data prior to beginning the implementation of the use of accessibility features. The candidate also tracked and monitored student achievement data during the project completion.

The candidate facilitated the use of adaptive and assistive technologies to support individual student learning needs. According to **apple.com** (2016), "Intuitive by design, iPhone, iPad, and iPod touch also come with assistive features that allow people with disabilities to experience the fun and function of iOS." Accessibility features on the iPads are designed with students with disabilities in mind. Students were able to receive help and support right where they needed it and right when they needed it.

The candidate modeled and promoted strategies for achieving equitable access to digital tools and resources and technology-related best practices for all students and teachers. Historically students with disabilities are under-served with technology even though there is a section in their IEP specifically for Assistive Technology (AT). This Capstone Project specifically addresses and began to correct the digital divide for these students at Westside Elementary School.

Many of the students and teachers that participated in the project noted several of the features and tools that were introduced to them during this project will help them beyond the timeframe of this project. For example, one teacher after using the Text to Speech Technology

(TTST) for herself and seeing her students use the technology has decided to teach her new students this year how to use the technology so that they can enhance their everyday lives. Parr (2011) suggests that once students really understand how to use TTST, they will use it as a lifelong coping skill.

Madeira, Silva, Marcelino, Ferreira (2015) discussed the huge growth in mobile technologies allowed for the creation of numerous new learning solutions that can be adapted for specialized education, individualized and adapted to the rhythm of learning of each student. By using technology to help students make up for their weaknesses, they will be able to work closer to grade level. They will be more engaged as well. The improvements in usage of accessibility features will help to close some of the identified gaps between special education students and their non-disabled peers. The candidate found this to be true as well. Students with disabilities who participated in the project had growth across all academic areas when allowed to use the accessibility features.

This Capstone Project was designed with Universal Design Principles (UD) in mind. Throughout the course of the Instructional Technology program, candidates learn about UD and its implications for students and teachers. Burgstahler (2012) discusses UD in education, She includes the process and application of UD. The candidate used the application of UD discussed in the article and helped students and teachers to see how to use UD and why it is important.

The Capstone Project was a huge undertaking for the candidate. When the project began, she didn't realize just how much impact the project could or would make. The candidate was hoping to have all schools within the district adopt the use of accessibility features for all students with disabilities. The candidate hoped she would be able to provide training and support

on using accessibility features for students with disabilities. As stated above four schools from Polk School District have not asked for or shown interest in receiving additional training for accessibility features. The candidate will continue to pursue those schools because she knows the value in helping students overcome their disabilities independently.

Prior to completing this Capstone Project, the candidate had made an assumption that no students or teachers were previously using accessibility features as an accommodation for students with disabilities. When the teachers at Westside Elementary School were given the survey prior to beginning the project the results revealed that many assumptions about accessibility features use were correct. While many were correct, one assumption was incorrect. The candidate assumed that most teachers know about accessibility features that are available on the iPad because of a training that all Polk School District teachers are required to attend once they are hired. The candidate found that many teachers did not know the term "accessibility features." When the candidate was considering ideas for this Capstone Project, she almost did not consider completing it over the topic of implementing accessibility features because she assumed teachers already knew about the features and how to use them. The candidate began really looking at the amount of accessibility feature use for students with disabilities and quickly realized this was not the case.

During this Capstone Project the candidate could have done a better job at finding time to work with students and teachers outside of the students and teachers that are within her normal schedule. Teachers and students who came into direct contact with the candidate received much more detailed, personalized, and frequent assistance than those who did not. Due to scheduling and time constraints the candidate could not work with those teachers and students who are

outside of her daily schedule as much as she would have liked. Therefore, students who received

more support from the candidate showed higher growth while using the accessibility features

than those who received less support.

References

Apple Inc. (2016). Accessibility. Apple.com. http://www.apple.com/accessibility/ios/

Burtgstahler, S. (2012). Universal design in education: Principles and application. University of

Washington, DO-IT (Disabilities, Opportunities, Internetworking, and

Technology). http://www.washington.edu/doit/sites/default/files/atoms/files/

Universal-Design-Education-Principles-Applications.pdf

Hall, T., Cohen, N., Vue, G., & Ganley, P. (2015). Addressing learning disabilities with UDL and

technology: Strategic reader. *Learning Disability Quarterly, 38* (2), 72-83. doi:

10.1177/0731948714544375

Parr, M. (2012). The future of text-to-speech technology: How long before it's just one more

thing we do when teaching reading?. *SciVerse ScienceDirect, 69*, 1420-1429.