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-A Research Proposal-

Introduction

Our topic is whether there is a correlation between an essays’ success and method of writing (handwritten or typed). The question we will be asking is “Is there a correlation between writing and the use of technology in the lives of children with disabilities?” in order to determine whether technology is useful in academia. This study is relevant to us due to the time period we are currently in. In this time period where technology is rapidly developing with greater and greater technological advances coming out we are being thrust into a technology dominant society. Due to this, heavy emphasis is placed on the usage of technology in terms of productivity. However, we wonder whether technological advances always parallel productivity and success. Perhaps, in the field of writing technology as a tool could be a crutch for writers. Many argue that technology in the field of education is counterintuitive and that it does not quite revolutionize academia enough in order to be widely accepted as a crucial tool in education. However, as we have experienced education with an observing eye as a generation who had witnessed the technological revolution first hand, we see a correlation between technology and help in learning. More specifically, it can be seen as most helpful for students with learning disabilities, as we have witnessed ourselves. This is something the both of us have seen in our previous academia as well as in the writing center, and due to these observations, we will examine whether technology can help students’ with learning disabilities when writing essays.

Lit Review

         Recently as technology grows in society, and inches its way into education more and more, it raises the question of whether it is a help or hindrance in the academic field. This is a broad and widely studied topic that leads studies in many different directions. Often a direction being pushed comes from the multiple perspectives of users as humanity navigates through different viewpoints of the technological revolution. From the elder perspective, technology can be seen as a critical and important aspect to young students’ lives. If such an aspect can be so significant, then perhaps it should be implemented into education systems (Stephens). Stephens proposes that the generational gap in technology usage (being that technology is intensely involved in young students’ lives) can be successfully implemented into writing education and can help merge the gap between classroom writing and real-life writing, a gap that is often very difficult to merge. Recognizing the strong resonance that technology has with youth is important, and as Stephens argues can lead to outcomes that are highly beneficial. However, with new claims fighting for the importance of technology in the classroom, many wonder whether this is too radical a change.

This fear comes in questions of whether technology will worsen or better education, and in many cases writing. This is something we will be examining, as we feel technology may have a positive impact on a demographic of students, and is not a tool that is reshaping education but rather remodeling. This is supported in a 1990 study in which 6th graders were given half a year without implementation of a computer in the classroom and half a year with (Michaels). Computers, in this case, did not re-adjust the curriculum or learning, but they did create new opportunities for writing and progressing in writing, with some standout circumstances of voluntary writing outside of class assignments. This study may establish that there is no reshaping of classroom writing due to technology, however, the study does not examine the magnitude of change in the critical aspects of the writing and its effectiveness.

Many for technologies improvement of writing argue towards the hindrances of handwritten works in continued writing processes such as revision and planning (Connelly). In Connelly’s study students were set to write essays both handwritten and typed. The implementers of this study also examined writing and typing speeds. On average, the handwritten essays received higher scores, and thus justified that handwritten works are not detrimental to students. In accordance with theses studies’ findings, there are many other practical reasons for handwriting across a number of fields (Gladstone). In relation to education, handwriting is most significantly impactful when used to teach others and can be a factor in strong or weakened learning of material (MacArthur). With these studies in mind many may argue for the validity and superiority of handwriting to computer typed writing.

Studies, however, on 6th graders utilizing computers in composition for essays showcased some significant improvements in certain elements of the essays, and no significant downfalls in other aspects of the typed essays. This one wanted to understand if differing computer level abilities would impact scores on essays, and as explained prior, it did not (Burke). One study even found a correlation between low level writing skill and handwriting fluency (Barnett). This points out how handwriting can pose certain barriers for a demographic of writers.

In opposition to handwriting, technology not only impacts the writer’s actual act of writing, but even their learning in the classroom. A 2007-2011 focus group studied an array of factors that technology can have on the classroom. They examined things such as plagiarism, citations and satisfaction with technology’s place in the school. 79% in the focus group of teachers agreed that technology in school allowed for greater collaborative learning in the classroom (Purcell). As these studies focus on the impacts of technology in education we realize an aspect within this that requires further research in order to fully understand technology’s effects and whether they be useful or not.

Studies point out the difficulties and impairments that students face in traditional education settings. Technology can offer a wide variety of aide to students with learning disabilities, including making text interactive (Kumar). One study even focuses on the significant importance of speech to text aide advancements for students (Kitchens). However, we feel there is a gap of focus specifically on writing in conjunction with technology for students with learning disabilities. Therefore, we will study whether there is a correlation between writing and the use of technology in the lives of children with disabilities in order to determine whether technology is useful in academia.

Data Collection

         For this study data must be collected on the degree to which a student can write successfully. We will test students both with and without the use of technology, as well as with and without disability to form a control group of sorts. This will be done to determine later whether or not technology does have an impact on students with disabilities They will create academic compositions either typed or handwritten. For these compositions, they will be given prompts at their specific grade level anywhere from sixth to twelfth grade. Students will one day be given a prompt of paralleling difficulty with the tools for completion being paper and pen or pencil. On another day, to avoid draining the students’ stamina, they will be given prompts of the same level of difficulty and given a computer with a document function as their tool for writing. For each essay, they will be graded on sentence structure, word choice, grammar, and overall effectiveness. A standard rubric with these criteria will be developed in order to assure proper grading. In order to grade most effectively, professionals of this academic field will perform the grading, all working off of the same rubric and grading criteria. Then scores will be compared overall and individually. The average overall between prompts will be taken into account as well as the average gap between scores. This will aide us in indicating to what degree students’ success is being impacted by technology in their writing.

Data Analysis

         Data collected will be compared internally to determine whether students who hand wrote or typed excelled in all the criteria necessary for both students with and without disabilities. We will examine and grade the essays based upon the criteria of sentence structure, word choice, grammar, and overall effectiveness. Sentence structure will focus on whether students are creating sentences that are grammatically correct without punctuation errors, and that efficiently portrays the thought in the most effective manner. Word choice focuses on the students’ vocabulary and its difficulty and variety.  Grammar focuses on a students’ overall grammar, punctuation, and spelling. Overall effectiveness encompasses a student’s overall structure of the paper and to what degree the student accurately responded to the prompt in the best way. We will examine all these components and utilizing the rubric the essays will be graded based on these criteria. The range of grading will be out of 100 points. 25 points each will be allotted to the fulfillment of each criteria. An essay that completely fulfills each criterion in an exemplary manner earning full points, and thus decreasing in points the less and less an essay fulfills these criteria. Then these scores will be used comparatively between the two essays completed with either handwriting or typing.  We will also look for any significant outlying data that may represent another type of correlation.

Timeline and Materials

 The research study itself is a fairly short study that will take about a week to conduct, however our first step we would have in this timeline is determining who will be subjected to our project. This would be done by finding teachers willing to have their classes studied on their writing, and then gaining permission from the parents of the students in the class. Over the course of a week we will assign two prompts: one that will be handwritten, and one that will be typed. Both will then be graded by professionals in the academic field.

After comparing both the overall average of the scores and individual scores we can then begin to analyze what the data is showing, and hopefully come to a solid conclusion. From there we are looking to publish our findings in *Learning Disabilities Quarterly* which would mean we have roughly two months before our desired publish date to conduct our research, analyze the data, and come to a conclusion, as all of our findings would have to be compiled into an article and then submitted a month before the journal goes to print. Another viable option for our research is to present our findings at the National School Board Association’s Annual Conference (NSBAAC) in 2019 as the 2018 Conference takes place from April 7th to the 9th, which would not allow for sufficient time to collect and analyze our data. Presenting at the NSBAAC in 2019 will give us close to a year to collect and analyze our findings, meaning more studies can be done. Both of these options would be beneficial for sharing our data as our research deals with learning quite heavily, and presenting our findings to the NSBA will allow for a greater chance of implementing a new form of learning for students with disabilities, while the journal will allow for those specifically interested in our findings to delve deeper into what we have actually found.

 Materials needed for this would be paper (with the prompt attached) for students to write their essays on, computers to type on, and a scoring sheet would need to be made in order to more easily organize the data. Both the scoring sheet and prompt would need to be photocopied to accommodate for each student that would be participating, which means we would need to have access to a copy machine, as well as computers for each of the students.

Broader Impact

 Our research will impact several different fields of study. Two in particular are studies done in both academic writing and technological communication. The former will be impacted as we will be able to use our data to help determine if technology is a help or hindrance when it comes to writing academically for a grade, and the latter will be impacted as our data can be used to determine whether or not the use of technology for academic purposes has any effect on the language used by students when writing the essays. This ties into the Ott as most conferences are done with the writer’s work on a laptop with all revisions being done in the moment. If our research proves that handwriting an essay is more effective, then it might be beneficial for tutors to lean towards having the writer write their essay on notebook paper as opposed to a digital page, and if it doesn’t then those who do work on paper should consider switching to digital forms of writing.

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