

Jonathan Aguilera

Mr. Rambhia

AP Research

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Prep Journal

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Inquiry Proposal Form

Jonathan Aguilera

Research Question

Based on two types of self-paced education, one where emphasis is put on video learning and one where emphasis is put on reading online texts, which provides higher test scores and student confidence in Sedgwick Middle School?

Reasons for Choosing Topic

I always wanted to explore new ways to learn from the same old “lecture-study-test” format of a normal classroom. That’s why I went to self paced learning, a way of learning that isn’t as stressful as you do not need to worry about being left behind. The problem is although there has been research done on this method, there are little to no direct comparisons of the types of self paced research that people use. One method, like videos may suit one audience but not the other. By starting with the two most popular methods of self-paced learning I can gage which appeals to a middle school audience. I use this audience because this is the age where students begin to be independent and open to this kind of learning.

Data Needed

To address this question I will need to administer a test that I made to video learners and book learners. I will directly compare the test scores between the two groups to see if there is a major difference between either of them. After this, I will begin to interview each of the students to get a general consensus of what can be improved in either method and whether self pacing in general has an impact on them.

Sources for Introduction

Klausen, J.. (1973). Another View of Self-Pacing. *The Science Teacher*, 40(3), 5–5.

This source compares self pacing on confidence of a younger audience to address the latter part of my RQ.

Ng'ambi, Dick, and Annette Lombe. "Using podcasting to facilitate student learning: a constructivist perspective." *Educational Technology & Society* 15.4 (2012): 181+. *Academic OneFile*. Web. 24 Sept. 2015.

This source talks about podcasts and their positive effect which is what I'll use in the video group.

Lacey, D. N.. (1981). Self-Paced Latin at the Ohio State University: Testing and Grading Systems. *The Classical Journal*, 76(4), 342–356.

This source talks about the general self-paced learning process and also the positive effect of using textbooks.

Research Method

This is an experimental research through a mix of quantitative(test scores) and qualitative (interview) data. I would make a week long curriculum for both the video and literary lessons. The students would be put in one of these two focused topics and then be given a sheet of what they need to learn for the week. The video group would have links to youtube videos and podcasts that I have found or created. The literary group would have links to online texts and articles that I have found or created. To prevent cheating or having a person get a mix of both types of learning, all learning will be done in class, for a period of an hour after school. After a week, the students will be given a test and I will compare the test scores as quantitative data. After the test, I will interview each student to ask them about their experience and how confident they are from this research.

Resources Needed

I will need a room to use after school in Sedgwick and also general approval by their faculty to do this. I will need to find/make podcasts, videos, and online texts for the students to study from. One computer for every student will be needed so I can either get a laptop cart or do the experiment in a computer lab. After all this, I would need to make the test the students would take and notes of what they said during my interview (whose questions will also need to be made beforehand).

Anticipated Challenges

Since I am doing this study in a different school I will need a reliable mode of transportation from Conard to Sedgwick. More importantly is that I would need permission and availability of the staff at Sedgwick to do this experiment in the first place. Making all the material will take some time but I plan on doing this experiment a few months from now so I have time.

Expected Approvals

IRB

Sedgwick Staff

The students' parents since the students are underaged

Teacher's Feedback

Teacher's Approval (signature): _____

Exemplar Work:

Poster Project

A Comparison of Self-Paced Education Styles: Video and Literary

Jonathan Aguilera
Conard High School Student

Self-Paced Education is a new type of learning where students learn the material at their own pace. However, no studies have been made comparing the effectiveness of certain materials in a self-paced education course.

Based on two types of self paced education: one where emphasis is put on learning through videos and one where emphasis is put on reading online texts, which provides higher test scores and student confidence in Sedgwick Middle School?

Traditional Classroom Learning-
Transmitting course material through lectures with a set pace for the class.
Self-Paced Unit-Short selection of material a student learns in a self-paced course and must master in order to go to the next

Students have different types of learning but video learning may help more due to the combination of audio and video.

This study compares how today's high school students prefer to learn, in case a self-paced education style is implemented in the future. Also, it identifies how student's confidence is affected by this course and whether the transition will be smooth or not.

Students will be placed in two groups for both video learning and book learning respectively. They will learn with these materials through 2 small units of work and take a test at the end. Test scores will be tracked and interviews of each student about their confidence will be used.

Klausen, J.. (1973). Another View of Self-Pacing. *The Science Teacher*, 40(3), 5-5.

Ng'ambi, Dick, and Annette Lombe. "Using podcasting to facilitate student learning: a constructivist perspective." *Educational Technology & Society* 15.4 (2012): 181+. *Academic OneFile*. Web. 24 Sept. 2015.

Lacey, D. N.. (1981). Self-Paced Latin at the Ohio State University: Testing and Grading Systems. *The Classical Journal*, 76(4), 342-356.

Annotated Bibliography Sample

Zysk, W., & Filkov, R. (2013). Self-paced learning with 3D humanoid virtual tutors. *European Scientific Journal*, 4 SE, 651+. Retrieved from

<http://go.galegroup.com/ps/i.do?id=GALE%7CA360995052&v=2.1&u=west81074&it=r&p=ANE&sw=w&asid=26848f02e7be1eb281d0024c95b4a091>

This study tries to combine visuals into self learning. Since movies are self-pacing, people only consume it passively. They needed something that can provide the relevant information that allows choice on what a person wants to see, at what perspective, etc. so they made virtual tutors. The article lists the limitations in that traditional mocapping and other techniques made it hard to create such precise animations such as safety reasons or body parts blocking. They made their own video player to control the virtual tutor, after making the tutors out of a 2d stickman sketch and recreation of the human body. The test audience found that the program itself was very user-friendly and informative. The only bad side was that some people were too distracted by the theme of a virtual tutor itself and didn't pay as much attention. This provides an interesting way to do self pacing and more research can be done, especially with the additional technology we have today. The only problems is that to create such a 3d tutor would take too much time without a program but to see the interest in this kind of learning is still helpful. Maybe I can apply this to other sources of self-paced learning, like videos, where students can see a demonstrations over and over again at various angles.

Data Analysis Sample

The higher difference in average scores for Unit Two was only 2.4% which is a negligible number. Both groups had done significantly worse from Unit One to Unit Two. This is understandable as they had been more preoccupied with the material in Unit One first. Again, the test should have been separated between the two units. Aside from the two students with zeroes skewing the data, there is a greater decrease in scores from unit one to unit two in the Reading Group due to the lack of review material. Unit Two consisted of grammar which would require a shift from memorizing vocab to rules on how each sentence works. This was not done smoothly and could be easily forgotten. Overall, student confidence in this experiment did not go well as many preferred a teacher but adjustments could be made to their complaints in further research. For example, if an actual self-paced class was in the school as opposed to after school as research project, students would be more inclined to study more as it is not optional. They would also be given more time as well. Along with that, a more engaging subject could be picked such as Math which has also been effective in Self-Paced learning. What is most important is that there be a bigger teacher presence in the beginning of the unit so students can adjust to the whole process. If done too abruptly, students will immediately procrastinate and be more preoccupied with their other activities. Short lectures and “small tutoring sections” like the ones from the self-paced French course could also be used to encourage students to learn more and feel more comfortable (Leblanc, 1992 p.4).

Documentation of Permission

Informed Consent Form for AP Research Project

This form is used to provide information to the research participant (or parent/guardian) and to document written informed consent.

I am a student at Conard High School enrolled in a course called AP Research. As part of my project, I will be interviewing students. Voluntary consent must be documented prior to any survey or interview.

Participation in this study is completely voluntary. If you decide not to participate there will not be any negative consequences. Please be aware that if you decide to participate, you may stop participating at any time and you may decide not to answer any specific question.

If you participate you will be asked to take a short test to assess how much you have learned Welsh in a two day period. After the test, a short interview will be given to ask if you liked this style of learning along with other comments.

Confidentiality will be maintained by not referring to any test or interview answer by name. In the paper you will be given a certain letter to be referred by. Test scores will not be made public to the class so only you receive your answers.

If you have any questions about this study, feel free to contact:

Teacher: Sanjay Rambhia

Email: sanjay_rambhia@whps.org

Student: Jonathan Aguilera

Email: jonaguilera123@gmail.com

By signing this form I am attesting that I have read and understand the information above and I freely give my consent/assent to participate or permission for my child to participate.

Printed Name of Research Participant:

Signature: __

Parent/Guardian Printed Name (if applicable): __

Signature: __

Gumdrop Activity

The gumdrop activity we did in class was as a group of 4, we were supposed to recreate a gumdrop sculpture. Each group had 1 watcher who saw the sculpture who then told the 1 messenger in words what he/she saw. This messenger then explained what he/she heard to 2 builders who make the actual sculpture. Due to the nature of this activity, groups had to employ teamwork and keen observation skills to make the most accurate sculpture. In this whole process, I began thinking of what this had to do with research until I realized that this sculpture making process was just like the research process, you see something you want to recreate perfectly (your ideal topic/paper) and you have to keep going back to make sure each part of your paper is just the way you want it to be. You need to make each part of the research process from gathering sources to interpreting them work together or else the final 'sculpture' ends up looking vastly different as you forget what you were originally striving for. After this activity, I used this as a model and a lesson for my research to make sure my work meets my personal sculpture of research and to be able to focus on how all different aspects of my work affect my paper.

Getting a Topic(s)

After the gumdrop activity, the next step of the process was to be able to just find a topic to write about. There's a lot of things to write about, especially with the amount of time we are given, but I knew I needed a topic that can fulfill a few simple requirements: It needed to be researchable by myself, other studies have been conducted to bring support to the issue, and it just had to be fun to research. My ideas after considering all of this became much more condensed but it was still not enough. Because of this, I have consulted the aid of a few classmates in discussing these possible topics to see what they think and to bring new insight I

haven't thought about. When explaining my possible topics I then became to see my first mistakes, the topics were too recent. I had wanted to write about the ethical stances of the nuclear deal but what real research had been done in such a small time period. The problem, I now realized, had to be ongoing but ongoing for years in order to fully research it. Because of this advice, I had my two topics to go on about: The pacing schools have on elementary school children and the environmental circumstances of the automotive industry. People have researched these topics, schools and car shops/factories were possible to conduct surveys in, and they mattered to me since who doesn't like cars and who doesn't want a more streamlined education.

Being on Terms with Terms

From getting to topic to problem statement there are certain strategies that I had not known about. In class, an assignment was given in defining the following terms: Focus, scope, value and feasibility. All these terms connect to the research process as you use them all to go through with what you have already researched. You need a clear focus or object you want to research, mine being with the pacing in schools and the environmental standards of cars. You need to know the scope or extent you want to research in your topic so it's not too broad. Your research needs to be feasible or possible to do while assigning the values of what each source brings. By using these four terms, I can begin assessing how my topic will turn out. For example, I can tell the feasibility of self pacing research by exploring what scholarly search engines give me to see if there is enough research done on it and if it's relevant.

The (W)hole Problem Statement

It takes more than a topic to just write a paper, you needed an actual question or claim to explain or argue. Mr. Rambhia, my teacher, explained to our class that unlike our previous Seminar class, the research we had to do wasn't just gathering sources but being able to interpret sources in our full research paper. In Seminar our topics were more easily arguable and had a more 'taken stance' such as 'zoos are unethical and here's why' or 'the war in Iraq was unjustified'. The point in our papers is to locate a hole or under researched part in our topics and to be able to fill in said hole.

All this talk about what a hole is and how to explain it leads to the problem statement or intro to our research paper. Mr. Rambhia assigned a homework assignment that well encompassed this which is in the following link:

<https://www.scribd.com/doc/279284329/Transforming-a-Topic-into-a-Problem-Statement>

In it I looked at an excerpt from a research paper and saw how it applied to a certain formula or outline that would work well for my topic. It identifies the problem, circumstances surrounding it, victims, causes, and solutions. This outline was able to connect to the terms listed above as even in an introduction you can see what an author is trying to explain. He has a focus on cyberbullying on the scope/extent of middle school children. He brings us in by valuing the mixed-method study to show how the value in his work on how rampant cyber bullying is and why people do it. For my work on schools I will keep track of all of this to know what I need to research.

Beginning the Annotations

Like with all essays, your full topic will be determined by what your sources give. This is especially apparent with this paper as you can't find a hole in the research without seeing what has already been said on a topic. With this in mind, the beginning of my annotated bibliography went underway. Due to previous experience of not being able to use search engines like academic onfile, I went to my trusty friend JSTOR. After fiddling with keywords, I first decided to scrap the car idea as my interest in it began to wade after giving thought about it and focused on my topic of schools and pacing. The articles that came up that best aligned with my idea of better pacing in schools was self pacing itself. Immediately this had helped focused my topic down and there was plenty of research done on whether having students progress through classes at their own pace was better or not. Although not a complete hole, an experiment about self pacing in a spanish class offered at the end that more research in the areas of individualization and alternate modes of teaching needed to be made. Overall, this foundation of a more focused topic and a hole has shown great aid as I start this annotated bibliography.

A Focused Topic of Inquiry

After considering of all this new information and order I found when starting the annotated bibliography, I needed to finalize the topic I needed to research. As this was an assignment, here is the link to what I wrote: <http://pastebin.com/Kx21HHTQ> . By using the assignment on how to write a problem statement, I have used it to model this inquiry on what methodology, circumstances, causes, and solutions I need to find in order to make my paper. By organizing all this information, I have provided a roadmap on what I need to scope in on: Self

pacing. While doing this assignment I was learning by just seeing the definitions of methodology which puts in my head another thing to look out for when researching my topic.

A Textbook Example

If there's a subject, there's a book for it. Same applies for research. In the research textbook it discusses the approach to your research question or problem. Much like the hole that was discussed earlier, research projects have already been made to further basic knowledge or address immediate issues but they don't cover everything. With this in mind, the book clarifies on how you should look for a problem. In essence, it should be helpful in determining to the solution of the main problem you're addressing. This applies to my project as by researching the different methods of self-paced learning, it will contribute to the implementation of such learning by offering people the most efficient way to learn. In order to be beneficial, the research needs to examine the cause and why it's happening, hence why I am mixing qualitative research so the students can say why one method does or does not work. The textbook goes through this and the many other guidelines in order to keep my process more focused, thus making it helpful.

Watching the (Video)Game

In order to build a bigger foundation of what my research project needs to be, I watched a video in class of what a previous AP Research student has done. The student did a presentation of the link between Videogames and how it affects male body image. In it, she builds a background of negative body image in general, thus helping the viewer understand the problem being dealt with at hand. This will help in my paper and presentation as self-paced learning isn't as well known and has many different uses/implementations. By studying the history and process

of self-paced learning, it will make the overall argument and solution that much more apparent in guiding education further.

Working Backwards

In gathering sources, finding just the right ones is harder than it looks. In this process, I encountered the problem of finding which of mine were and were not peer reviewed. JSTOR, my main search engine, did not have a specific filter on what sources were or were not peer reviewed. Not knowing this until now, I asked for help on how to make sure it is. In my opinion, peer reviewed sources are better but if a person is able to get quality research and provide the data for it, that is just as helpful. The data itself, if not peer reviewed, can be helpful in my paper. If everything needed to be peer reviewed to matter, what would be of our research papers? Nevertheless, I found the answer as it turns out you can google the title of the article you have and put peer reviewed after it, hoping to get better results.

PAARC a Car

Although academic search engines strive to give well, academic sources, not all are equal. In order to make the best paper possible you need to make sure you're getting the most credible sources. That's why the PAARC test exists. I have used this acronym: which stands for Purpose, Accuracy, Authority, Relevance, and Currency (timeliness), to weed out the good and bad sources. For example, I have seen a few articles concerning topics of education but they are not talking about self paced education rather the effectiveness of schools and studies in general. These articles have not been very relevant so I am not using them. This test is a good tool to make sure more articles I'm researching are on track and fair.

Refine a RQ

Effective research concerns effective research questions. Hence why it is important to notice mistakes and refine them as a RQ is the backbone to your research. Mine was: What are the most effective ways to enforce self paced education in middle school students? Although I did keep it unbiased as to not assume, which was a vocab word, certain aspects of the education system such as its current state, it was a bit broad. As I begin to narrow down on ways to enforce self paced education, I will need to list those instead of saying “what are the most effective ways”. Also, I need to target where the middle school students will need to be as I can use broad statistics but that would not be very feasible, especially with the given sources I have targeting at most a classroom. I can narrow this down to the specific middle school I will be experimenting at and use my other research to explain my findings.

What Consultants Do

In order to help guide researchers, consultants or experts in the field a researcher is studying about is very helpful. There are however, certain rules in these experts. As I’ve learned, consultants aren’t mentors in that they don’t completely guide me through my research process. This is not to say that consultants are for show as they can recommend articles and answer specific questions. For my project, I can use a consultant like a teacher to see their point of view on self paced learning and maybe give observations on how it has worked in the past. Consultants make a great resource and by getting all these questions of “Can self pacing work?” can be answered now.

The Internal Review Board

Experiments can have a gray area of morality, and it's these shades of gray that the IRB need to address. The IRB is an organization in that if you want to do an experiment, you need their permission if you fall into certain categories. Categories like human experimentation, experiments that concern sensitive topics such as stress, and the worst, being able to publish your paper. I can see that their intentions are noble in that anyone can't just fool around with new drugs or asking kids at an elementary school about murder, but to publish a paper seems unnecessary. Being able to abide by the IRB is allegedly a long process of signing papers and getting papers and our school doesn't even have one in place. This can change the pace of my research as I may need to vary the ages of people I interview but as my knowledge is still very basic, I will need to address this later on.

I Cite

To cite or not to cite? That is not the question as it is necessary to do so in these kinds of papers. What matters is in what form I should do it. Our teacher went over a presentation on the various styles and how they are used. Things such as MLA, APA, Chicago, were up but what differentiated them was in their use. For example, one would use Chicago for more history related research while my research, which is mainly a social kind of experiment, would be APA. This helps because I could keep a consistency of what format to cite my sources in.

A Paragraph on Plagiarism that I Copied and Pasted

Plagiarism, the act of using someone else's work as your own, is indeed an ethical issue that all researchers come across. As I can not just copy and paste walls of text from the sources I've gathered already, mainly due to the change of tones and tweaking needed to be done

anyways to suit my paper, plagiarism can be found in many different forms with one I didn't know about. This form is common knowledge, which is not as common as one would think since what is common knowledge for me is not the same for everyone else. This happens a lot when I mention self paced learning and no one knows what I'm talking about. So to combat this, I will make a definition and cite the necessary sources that make me come up with that. On the more broad scale, I will be more careful to cite sources to make sure my work is not plagiarizing anyone else's.

(Peer) Pressured Treated Wood

Another reading I got from my teacher was a source on pressure treated wood and what effects it had on the environment. Although it did not pertain to my topic it gave a good example on how to make a methodology. In that source, the instructions of how to set up the experiment were very detailed. It was to the point where I could do it without any knowledge on the process beforehand. I'll need to make sure I can explain my process of testing self paced education by going over my whole process in the paper rather than glossing over it and just giving the results. Also on the idea of results, is that the experiment had a multitude of statistics that I have never seen before. I don't know if I need to use z scores for the student's test scores so I'll need to inquire more on this for the future. For now, I'll make sure my methodology is detailed by making notes on my process so I know what the core concepts are for right now.

Meth(od) Head

Research itself is a very broad topic as one can research in many different ways. My teacher had assigned a list of all these types, from Action Research to Phenomenology, and had the class identify what factors made them up. For example, an Experimental Research would use

primary sources since you yourself are manipulating a variable and studying its effects. The point of this was to help connect our topic to one of these types of research so we would know how to organize our research. I found this helpful as I plan on doing a type of Experimental Research where I am going to alter the method of self paced learning to see which has the most beneficial effect on test scores. Using this method, I can look up various types of experimental research papers as examples of what I should include. By knowing the name of it, I can now improve my research by finding such examples.

Evaluating Methods

As a follow up to learning the types of methods, I was given a class assignment on identifying a method based on a research question and also revising said research question. These two things are familiar to me but the practice always helps, especially in case I need to help a friend on how to set up their method. What really engaged me was revising the question as it reminded me of how my research question should match up with my method. Right now I'm just asking what is the most effective way to implement self paced education and I'll be doing an experiment to prove such a thing. I look back and saw that I should narrow in more on how I should do this experiment in my research question so the method is more obvious. So to fix this, thanks to this activity, I have added in that I'll measure, which is a sign of recording and experimenting, test scores and confidence in students, if there is any.

“People who eat at McDonalds know their sins”

I engaged in an activity to align hypotheses and conclusions to a given experiment. This experiment was to determine if a 'health halo', or overestimation of a food's healthy benefits based on one claim alone, exists. In short, people were shown of a meal and were asked to guess

the amount of calories in it. There were two meals that had the same items except the second one added in 'trans fat free crackers.' People who were shown the meal with the trans fat free crackers had associated less calories overall to that meal as opposed to the meal without it. After reading about this whole process, I associated the hypothesis and conclusion that the author probably had, being that if people were shown meals with a health halo food they would give less calories and the conclusion being that the data supported such a hypothesis. I said this because the author said in his intro that he had been observing people make such unhealthy choices based on this. Being able to identify what an author of an article is looking for is a good skill because you can detect bias from it and it can also help me identify my own hypothesis based on how I organize my data.

Evaluating Paper

When writing a research paper it is helpful to have a 'model' paper that you should base your layout and content on but also a paper where you can identify its problems. In class we looked at the latter type of papers as I learned more by identifying mistakes and also to do so quickly. That way, I can proofread and evaluate my own paper. In the activity, I looked at an excerpt of a paper whose question was "What factors had the greatest and most direct effects on ending the Soviet Union?" Although the setup of the paper was nice by introducing the audience to the mixed viewpoints people had on this question, it was simply too broad to answer. A way to fix it was to narrow their lens, such as what economic factor, and by person. That way you can write a narrow paper on what person economically influenced the fall of the soviet union the most. This whole analysis of the excerpt was a good activity in having me remember what it took to make a detailed paper and I will do more of this on my own to prepare for my own paper.

Proposal Form

The Inquiry Proposal form was essentially a summary of what I was going to do for this paper and why. It had the outline for the experiment I was going to do and how to do it. When going through this I had to keep in my mind that the research I had to do was feasible. Because of this, I narrowed down my research question to compare video learning and book learning so there are not too many variables. Along with this, the Proposal Form was reviewed by other classmates and they told me to just do the whole experiment in the school. This was a good idea because to go to a middle school and then ask their administration to hold this program would take too long. Along with that, I was told to set the experiment for only two-three days so less scheduling issues would occur. This proposal form and feedback had a positive effect on my research as I was able to make it easier and more concise, along with having one source to have as my plan.

Poster Presentation

Along with the proposal form, a presentation was also made to tell the class what I was doing and why. Essentially, I introduced the idea of self-paced education and that video and book learning were going to be compared in this experiment. I started by making a 'poster' or picture that had my information split up into small boxes. This was to show the core information of what I was saying in an orderly fashion. Overall, the poster had all the information I needed and the presentation was performed well. I did not look back at the poster and I hit all the points of my experiment. This was a good practice for those skills since I had not done a lot of presentations in other classes. Along with that, the class was able to ask questions for clarification of my topic. The most important question came to be "What subject were you

studying?” because I did not know as well. The class pitched in ideas as although self-paced education can be used for a variety of styles, I needed a subject not a lot of people knew.

Unknown history topics such as specific battles were brought up but then I realized I can teach language as well. Not a lot of people know welsh so I can do that. This presentation helped my research by helping me narrow down my topic and plan ahead for my experiment.

Paper Chapter 1-2

14 pages of prep journal later, I have finally started my paper. The three sections that were made were my introduction, my literature review, and my methodology. The only problem was that I needed a clear plan to start the paper so I made an outline where I grouped up my sources and their annotated bibs. That way, the sections in my lit review would be more obvious and in turn, would help guide my introduction. My teacher also gave me a checklist of what I needed to include in my introduction was very helpful since I had forgot to put in simple things like my research question before that. The lit review was easier than it seemed, mainly because I had experience in seminar and that I had a lot of it written out from my annotated bibs. Still, I needed to connect each source in a logical manner so I still had to match up sources and put each section in its right place.

Making the Methodology

My methodology is still a rough draft in that the process isn't fully planned yet. I plan on teaching the welsh language, mainly northern welsh, so I have been obtaining sources of information to do so. Various websites giving vocab words and simple grammar lessons are being used to get the core material for what I am to teach. It has been a bit of a challenge in finding both video sources and reading sources that have to correspond with each other. Namely,

grammar lessons are mainly contained in the article session so I will need to make grammar videos by myself based on the book group. It does go the other way around in that basic phrases seem to be more apparent in the podcasts. Also, the podcasts and videos will need to be cut up in order to save time, mainly to remove the fluff of introductions and phrases that are not even covered in the book group. The easy part was making the interview questions as they are six open ended ones that do not beg for a lot of information. I will still need to check them over before finalizing them. A rough draft of my test will be made after getting all these sources together and it will be unique as I am learning this language also. This process helps my research as I can write about these challenges in my discussion on the feasibility of this type of research.

Welsh Volunteers, Assemble!

After finalizing the resources, the experiment could be done. I still needed participants so I asked my peers from the AP Research class if they were willing to help. Some students were not able to as they were busy with their own project but others were willing to help. I had gotten six participants in this manner until one of them gave me a good idea: why not do the curriculum in class? The participants were at the right pace in their projects that they could lend two class periods to study the material and do the test. Some were able to do these consecutively and immediately which brought in some quick data while others were spaced out the times they could do the curriculum. This more accurately reflected how a self-paced unit would run as I did not force any participants to do the curriculum immediately. They were able to ask me when to take the test. The only limitation was that they did not have more than three class periods to study the material which every participant was fine with.

Six participants were not enough so I asked some friends if they were able to come after school to the library and do the curriculum on laptops where I was always around to answer any questions.

None wanted to go.

But, another idea came to me in that I can assign the curriculum as homework where participants would receive the resources in their google account and they can learn at home. This added flexibility for when participants can learn. The only main disadvantage was that I would not be their to help with any questions. One of my friend's did the curriculum in this manner.

With seven students I still wanted a few more. I decided to give a presentation to the AP Seminar classes as those students had helped with other surveys and projects from the AP Research class. After presenting, I had been able to get two more students to come after school and do the curriculum on the laptops. Food was offered as an incentive to the AP Research class but the two students who came were not interested in it. I would offer them some chips and they would say no thanks. The only food they consumed was one kool aid pouch. Luckily for me that meant I got to keep the 10 dollars worth of food I bought for them.

In the end, I learned that being flexible was a necessity in garnering students for an experiment like this. I needed people who had time to commit to this project when many other activities were going on in the school such as the musical and winter sports. So instead of just solely doing it after school in the library, I extended the curriculum to be done during the AP Seminar period, at home, and in school.

Тест и Интервью

After the participants were done with the curriculum, I had them take a Welsh test and interviewed them right after. The results were mixed. Some students seemed to push through the test while others would finish it in a few seconds, leaving only one answer or two. It had become apparent that the latter did not learn much Welsh and I needed to know why. During the interviews they explained that time constraints and a lack of motivation were why they did not learn. All the people I interviewed said the test was fair but for a fair test there should not be so many failing grades. After looking back at the test I saw two main issues: the curriculum was far too big and the units should have been separated. I had participants learn a wide variety of vocabulary and phrases in unit one that they can not retain in such a short session. Also, some participants admitted to rushing through the curriculum so their overall knowledge was very shallow. I should have cut the curriculum up into four or five units and had each student pass a unit test before going on to the next one. That is what other sources have done and I seemed to have forgot about it. On the bright side, this just affirms the idea that self-paced learning needs to provided motivation early on from the educator so students do not procrastinate. Also, the curriculum should match the time allotted so there is no rush.

The Whole Enchilada

Since the experiment has finished, I was able to finish up my paper. The methodology was changed so it matched the three venues that a participant can use. Other than that, it did not change significantly. What took most of the time was just analyzing the data and forming a conclusion. I needed to form conclusions based on the data from the tests and the interviews. I decided that a table would be the right form for conveying the test scores between groups as it is

pleasing to the eye and short. After looking at this, I was able to see more clearly of where the connections were and what parts I needed to explain. For example, the video group skipped far fewer questions than the reading group so I affirmed that they had more background knowledge from absorbing the video. Also, these answers were not all right and some of the answers were in another language. Explaining the interview was simple as I explained the responses to each question and what it meant. Essentially, it is the same analysis as the above paragraph.

Now all that was left was the conclusion. Initially, I did not know how to make one as I just summarized my findings and how self-paced education was still useful. This ended up being a very small paragraph so I looked to my peers and online resources. After doing so, I was able to add to it by describing my initial research from the lit review and how these all connected. This helped the paper overall as the purpose was explained and allowed readers to pursue additional research on this topic.

A Peer Reviewed Paper is a Pretty Paper

Content-wise, the paper was finished. But I knew that there were parts that could be better explained to the reader. My teacher realized that the rest of the class felt this way so he gave two class days for peer review. Reviewing a paper is always nice as you get a fresh pair of eyes to see your work. Also, you begin to see how you can make your paper better by seeing the mistakes of other papers. This happened to me as I saw the structure of the literature review in one paper to be a bit abrupt. The sources were not explained fully and it felt like the student did not incorporate their voice into the paper. I saw that I could have ended the paragraphs with more thoughtful conclusions due to this. After getting my paper reviewed by my peers, I was able to correct these mistakes. Another thing I found out was that one of the quotes I used in the data

analysis did not seem to fit in with the tone of the paper. A student admitted that he could have tried harder but he didn't. I thought this would make a point that motivation is necessary but it looked like he was just discrediting the experiment as a whole. Because of this, I removed his quote. This was for the best and gave my paper a more consistent flow and feel.

Planning a Presentation

The next part to this ~~course~~ curriculum was to make a presentation of our work. I decided to use Prezi because I knew how to use it from my time in AP Research and it was more fluid than a simple powerpoint. I found that making this prezi was easier than the paper because I had all the information and data already. I started off with explaining what self-paced learning was and the types of styles that I evaluated. This helped introduce the topic and explain its importance in society as to many, it was just an idea of the 80's. After doing that, I explained a bit of my lit review in how it helped structure my experiment. For example, I based the video unit on how a science teacher made his own videos to teach his own students and how it was effective to them. Next, I explained my methodology and the findings of my experiment in the same manner that I did in the paper. I went over key points of the data and explained what I got from the interviews. Using these findings, I was able to conclude the presentation on how Self-Paced learning can be improved and utilized for today's society. This helped organize my ideas so I can concisely describe my topic to the public. Not everyone wants to read a 20 page paper.

Revising a Presentation

Like the research paper, my teacher allowed my class to rehearse our presentations. I had a solid foundation but I knew that winging it would not be good when the grade is worth so much. The presentation itself hit all the key points of my research and was understandable to the audience. I needed this so the panel of judges could follow along with me and see how important my research is to them. Some feedback that I received was that some pictures just distracted the audience and that I did not transition well enough from slide to slide. I also needed to not repeat my findings in order to save time. The first part was easy as I can easily delete a picture, but I knew that I needed to keep the latter suggestions in mind. Whenever I would rehearse after that I made up some connector phrases that I could use in case I forget something. I also reorganized the slides so the limitations were addressed early on so I did not have to go back and describe them again. This improved the fluidity of my presentation and made me more confident in myself.

Presenting a Presentation

After coming back from spring break I was warmly greeted by my teacher with him saying that I needed to present to the judges. The time had finally come and I knew that after this I was pretty much finished as far as college board was concerned. I did not wear formal clothing but rather than worrying about it, I just made myself look confident in front of the panel. Even if they were confused with my presentation, I could still get extra points for looking good. After setting up I went with my presentation the way I rehearsed it. The judges seemed intrigued with my work and understood what I was saying. I slipped up and made some abrupt comments when I was trying to explain how self-paced learning has been effective in teaching language but aside

from that I was fine. The real hard part was the questions I was asked. There were a lot of questions in the packet that my teacher showed me so I decided I could just improvise for that. The first two questions were simple as they asked why I chose some sources and not others, and how my findings could expand the teaching field. What really challenged me was when I was asked how I would improve my sample if the self-paced course was done for a few months. I did not know what sample they were referring to and I just assumed it was the volunteers. Obviously I would want more volunteers but that seemed to simple so I tried to explain that I make the course give academic credits so students were more motivated and better represented a self-paced class. I do not know how sufficient that answer was but it is too late to dwell on it. The best I can do is to learn to prepare for questions beforehand.

I hereby affirm that the work contained in this Process and Reflection Portfolio is my own and that I have read and understand the AP Capstone Policy on Plagiarism.

____Jonathan Aguilera____