

Addressing the Need for Technology in the World Language Classroom with Project Based

Learning WebQuests

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## Capstone Project Proposal

### Setting and Context

The setting for the proposed project will be in an honors World Language classroom (Spanish 4 & AP) at North Paulding High School (NPHS) in Dallas, Georgia during the school year 2020-2021. The technology infrastructure of the school is divided into three computer labs, ten laptop carts including Chromebooks readily available to use by students, and the teachers were recently issued laptops. NPHS is a traditional public school located in a suburban area in Paulding County and serves around 2,400 students ninth to twelfth grade: 67% White, 18% Black, 10% Hispanic and 3% Multiracial, and 18% of our student population is eligible for free/reduced lunch. Reportedly, 11% of the student population has a disability, 11% are enrolled in Special Education classes, 62% of the students are enrolled in Vocational Labs classes, 14% of students are enrolled in the Gifted Program, less than 1% are English Language Learners and approximately 51% of the population is male. According to the latest released data of the Milestone Test, the standardized test for the state of Georgia, 90% of the students at NPHS are reading at grade level or above, and 79.7% have mastered the content on the College Career Readiness Performance Index (Georgia Department of Education Report, 2019).

NPHS has an administrative team of five assistant principals and one principal who is beginning his third year at our school. NPHS also include a faculty of 168 teachers and 12 paraprofessionals. We recently adopted the Hybrid Model Schedule due to the COVID19 pandemic where the students have the option to attend in-person classes two days a week with three Digital Learning Days (DLD) a week, however, a full Digital Learning Model (DLM) Schedule is available to parents and students who decide not to attend in-person classes. The students who decided not to attend school in-person classes and are part of the school DLM are

still considered members of the student body, and are offered the opportunity to participate in schoolwide activities such as sports, clubs, band, etc.

During the DLD, teachers and students communicate via e-mail and the instructional technology program called Canvas. Teachers must plan for in-person days and for the DLD accordingly to maximize student achievement during the pandemic. Lessons are to be posted daily on Canvas for home instruction and for class discussions as well. This transition has created a high demand for teachers who are technologically competent and the need for a bigger and more inclusive Technology Committee in order to assist and coach other teachers with online lessons development, as well as to conduct Professional Learning Sessions on a weekly basis. The transition to the Hybrid Model instructional days has produced the need for the use of technology in every content area of the school. Teachers have said that they feel somewhat confident with the use of technology in their classroom, however, the circumstances have shifted dramatically where the use of technology has become required instead of suggested for every classroom regardless of subject or applications within the school. Teachers of all content areas are required to plan, develop, present and post lessons for the DLD on Canvas that are aligned with the Georgia Performance Standards for each academic subject, and that enhance student involvement and student achievement. These expectations have proved to be a major challenge for teachers who do not feel comfortable with the Hybrid Model and instructional technology concepts, and the expectations have exposed the need to develop user-friendly lessons that are both challenging and engaging to students. The World Language classroom faces these challenges wholeheartedly due to the reduced interaction between teachers and students, and the need for teachers to acquire the digital knowledge to maintain high-levels of instruction with challenging lessons that are engaging to students and develop critical-thinking skills. There is a

need in the World Language Classroom for the modification old tactics and the development of new strategies that can compete in the 21<sup>st</sup> century classroom.

### **Statement of Problem, Need and Rationale**

#### **Problem statement.**

The problem that prompted this project proposal is the need for meaningful use of technology in the World Language classroom, specifically in the honor Spanish classroom curriculum. The students who are enrolled in the honors Spanish classes are usually identified as Talented and Gifted (TAG), or they are identified as High Critical Thinkers. These students' grade levels vary as their High School career evolves, however, most students who are enrolled in the honors Spanish classes go directly to Spanish level 2 honors as freshmen because they complete the first level of Spanish in the Middle School. Usually these students move on to complete the full Spanish program which includes the Spanish AP course for college credit, and they do so by their Junior year. Since these students are high achievers who need to be challenged, the classroom instruction for these students should reflect their academic level as well. Implementing meaningful use of technology is a great tool in order to maximize their instruction, their understanding and their acquisition of a World Language. However, the task of implementing technology significantly in the World Language classroom has become very challenging, to the point that applying meaningful use technology is almost nonexistent. Online games such as Kahoot, Gimkit and Duolingo have been passed as meaningful use of technology for a long period of time. Although these programs have some educational value, they do not challenge nor enhance the students' critical thinking skills, therefore, we need to provide World Language teachers with the tools necessary for meaningful technology implementation in the classroom. One way to explore this multitasking, challenging approach to instructional

technology that is both meaningful and enhances critical thinking skills, is through Project Based Learning (PBL) and Webquests. As previously explained, the need for World Language teachers to acquire meaningful digital knowledge will allow them to maintain high-levels of instruction and create challenging lessons that in the process will engage students and enrich their critical-thinking skills.

### **Connection to research.**

According to a study by Grossman et al. (2019), an inquiry based PBL gives students the opportunity to find answers to questions that are authentic, challenging, and engages them in critical thinking by reflecting on the process, rather than memorization and repetition of rote exercises. Technology based PBL also can be beneficial to teachers because it helps the teachers incorporate their content knowledge into a more challenging task, allowing the students to internalize the knowledge which is the end purpose of language acquisition. The study was conducted in the School District of Philadelphia and included 50 teachers that were identified as experts in PBL, they then recorded the teachers' PBL lessons and collected data that led to their findings. The study found that when used appropriately, PBL can be a powerful tool to engage students in meaningful tasks that build a culture of collaboration and critical thinking. I believe that the same method can be applied to the World Language classroom and be very successful because the opportunities for engagement are limitless. From grammar learning and vocabulary enhancement to cultural perspectives, the students will conduct and participate in the process of learning that is not limited to the classroom.

In a World Language classroom most of the effort is focused on the teaching of grammar concepts and vocabulary memorization, often leaving behind cultural connections. Dema and Moeller (2012) found the culture and language acquisition are closely related and best practices

demonstrate that when culture and language are taught in tandem and that the separation of the two, or the total omission of culture, is counterproductive. The study corroborated that “teachers spent the greatest amount of time and effort on teaching grammatical and lexical components of the language, leaving the culture as the weakest component in the curriculum” (Dema & Moeller, 2012, p. 76). Even though teachers have been incorporating culture in their lesson plans, most of the concept is left to textbooks explanations that do not cover the whole picture. Incorporating technology instructional PBL can be instrumental in the understanding of the different cultures of the Spanish-speaking world.

**Proposed intervention/solution.**

Based on research studies my proposed solution and intervention to this issue is to coach teachers and students at NPHS maximize their potential when it comes to technology instruction implementation of PBL through a variety of methods including WebQuests. Through these methods, teachers will be more involved in the execution of lesson plans that include instructional technology based PBL and modify their instruction to become more of a facilitator than a lecturer. With the students, my proposed solution will allow them to conduct research on the topics that are more influential and interesting to them, experience first-hand the connection between Language Acquisition and Cultural Connections to their own personal lives. In a study conducted by Bell (2010), PBL is supported as a valuable tool to develop student engagement in real-world tasks. Teachers will be able to provide meaningful insight to the development of the projects, create engaging lessons that appeal to the students’ individual interests and trigger their critical thinking skills.

**Connection to research.**

My proposed solution will serve as a way to improve teacher understanding, use and implementation of instructional technology PBL as it relates to student achievement. For the TAG students, my proposal will allow them to maintain a high-level of engagement because the projects will give them options on how to proceed, take into consideration their individual interests, involving them on the process of their own education as well as to strengthen their critical thinking skills. In order to be successful in the implementation of instructional technology, teachers must be highly digitally competent so they can communicate their expectations to their students clearly, it is essential that teachers become the experts on instructional technology PBL (Renau & Pesudo, 2016, p. 27). For the teachers, my proposed solution will serve as a Professional Learning Community (PLC) where I can coach some teachers and put into practice some research-based practices.

Yazdanpanah (2019) says that teachers can sometime provide ambiguous directions to projects therefore leaving the students without a clear vision of the task, process, evaluation and final product, and if we want students to perform at maximum capacity we should provide them with a clear vision with high expectations of what we are asking them to do. Teachers should be the experts on the PBL components and then pass that knowledge to the students. Wang (2020) expressed the main factors that determine a meaningful PBL were collaboration, exploration and scaffolding. These factors are related to both teachers and students.

## **Project Objectives**

The purpose of my project is to provide teachers with the tools to develop, deliver and implement meaningful, challenging, and engaging technology based PBL activities in all World Language classrooms with a major focus of the honor classes at NPHS. In addition, I will help meet the goals and objectives of my project by helping teachers with these developments through coaching sessions using the TPACK model during PLCs and PLs. The following objectives are the basis for my project:

1. All teachers in the World Language department will improve their knowledge of how to develop technology based PBL activities by September 1, 2021.
2. The teachers who teach honor classes will have the knowledge of how to create and implement meaningful PBL activities for face-to-face learning and DLD by October 11, 2021.
3. 80% of the World Language teacher will be able to create and deliver technology based PBL lessons and assess the projects correctly by November 24, 2021.
4. 90% of World Language teachers at NPHS will be able to create and implement meaningful use of technology in the classroom through PBL by December 10, 2021.
5. Student engagement and achievement in World Language classes will increase by 35% based on the data collected through canvas by December 24, 2021.



**PSC Standards**

The following PSC standards are directly related to the development and implementation of my project, facilitating the use, development and implementation of technology based PBL in the World Language department. The selected PSC standards are:

- PSC 1.1 Shared Vision: Candidates facilitate the development and implementation of a shared vision for the use of technology in teaching, learning, and leadership. (PSC 1.1/ISTE 1a)
- PSC 1.2 Strategic Planning: Candidates facilitate the design, development, implementation, communication, and evaluation of technology-infused strategic plans. (PSC 1.2/ISTE 1b)
- PSC 2.1 Content Standards & Student Technology Standards: Candidates model and facilitate the design and implementation of technology-enhanced learning experiences aligned with student content standards and student technology standards. (PSC 2.1/ISTE 2a)
- PSC 2.2 Research-Based Learner-Centered Strategies: Candidates model and facilitate the use of research-based, learner-centered strategies addressing the diversity of all students. (PSC 2.2/ISTE 2b)
- PSC 2.3 Authentic Learning: Candidates model and facilitate the use of digital tools and resources to engage students in authentic learning experiences. (PSC 2.3/ISTE 2c)
- PSC 2.4 Higher Order Thinking Skills: Candidates model and facilitate the effective use of digital tools and resources to support and enhance higher order thinking skills (e.g., analyze, evaluate, and create); processes (e.g., problem-solving, decision-making); and mental habits of mind (e.g., critical thinking, creative thinking, metacognition, self-regulation, and reflection). (PSC 2.4/ISTE 2d)
- PSC 2.5 Differentiation: Candidates model and facilitate the design and implementation of technology-enhanced learning experiences making appropriate use of differentiation, including adjusting content, process, product, and learning environment based upon an analysis of learner characteristics, including readiness levels, interests, and personal goals. (PSC 2.5/ISTE 2e)

- PSC 2.6 Instructional Design: Candidates model and facilitate the effective use of research-based best practices in instructional design when designing and developing digital tools, resources, and technology-enhanced learning experiences. (PSC 2.6/ISTE 2f)
- PSC 2.7 Assessment: Candidates model and facilitate the effective use of diagnostic, formative, and summative assessments to measure student learning and technology literacy, including the use of digital assessment tools and resources. (PSC 2.7/ISTE 2g)
- PSC 2.8 Data Analysis: Candidates model and facilitate the effective use of 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. (PSC 2.8/ISTE 2h)
- PSC 3.3 Online & Blended Learning Candidates develop, model, and facilitate the use of online and blended learning, digital content, and learning networks to support and extend student learning and expand opportunities and choices for professional learning for teachers and administrators. (PSC 3.3/ISTE 3c)
- PSC 4.3 Diversity, Cultural Understanding & Global Awareness: Candidates model and facilitate the use of digital tools and resources to support diverse student needs, enhance cultural understanding, and increase global awareness. (PSC 4.3/ISTE 5c)
- PSC 5.1 Needs Assessment: Candidates conduct needs assessments to determine school-wide, faculty, grade-level, and subject area strengths and weaknesses to inform the content and delivery of technology-based professional learning programs. (PSC 5.1/ISTE 4a)
- PSC 5.2 Professional Learning: Candidates develop and implement technology-based professional learning that aligns to state and national professional learning standards, integrates technology to support face-to-face and online components, models principles of adult learning, and promotes best practices in teaching, learning, and assessment. (PSC 5.2/ISTE 4b)

- PSC 5.3 Program Evaluation: Candidates design and implement program evaluations to determine the overall effectiveness of professional learning on deepening teacher content knowledge, improving teacher pedagogical skills and/or increasing student learning. (PSC 5.3/ISTE 4c)
- PSC 6.1 Continuous Learning: Candidates demonstrate continual growth in knowledge and skills of current and emerging technologies and apply them to improve personal productivity and professional practice. (PSC 6.1/ISTE 6a, 6b)
- PSC 6.2 Reflection Candidates regularly evaluate and reflect on their professional practice and dispositions to improve and strengthen their ability to effectively model and facilitate technology-enhanced learning experiences. (PSC 6.2/ISTE 6c)
- PSC 6.3 Field Experiences: Candidates engage in appropriate field experiences to synthesize and apply the content and professional knowledge, skills, and dispositions identified in these standards. (PSC 6.3)

### **Project Description**

The implementation of the project will start on the Fall semester 2021. As the introductory PLC for this project, World Language teachers will be assessed on their knowledge of technology based PBL through a survey. The initial findings will determine the next course of action; however, a suggested course of action is provided with the purpose of reinforcing previous knowledge and to provide new information. On the following PLC/PL session the teachers will bring topics they are currently covering in class and will begin developing their own technology based PBL to match the concepts, with the assistance of the coach. Following that, the coach will record a lesson where the use of technology based PBL is implemented with the students in the honor classes, so the teachers can see how the implementation process runs at the beginning stages of the development. The coach will provide the teachers with a checklist, so

they can follow along with the steps that the coach is performing with the class and also assess the coach. During the next PLC/PL teachers will bring the checklist with any questions they may have and a coaching session will begin on how they will proceed with their own PBL.

Table 1 outlines the project items/activities, objectives, and deliverables that will comprise this project.

*Table 1*

*Project Strategies*

Project Item/Activity	Project Objective(s)	Deliverable(s)
Coach conducts research on best practices for design, development, and implementation of technology PBL in a World Language classroom.	All teachers in the World Language department will improve their knowledge of how to develop technology based PBL activities by September 1, 2021.	<ul style="list-style-type: none"> <li>Survey Monkey to collect data with specific questions about PBL and implementation.</li> </ul>
Design and develop surveys for teachers on their knowledge of the best practices for the design, development, and implementation of PBL in the World Language classroom.	All teachers in the World Language department will improve their knowledge of how to develop technology based PBL activities by September 1, 2021.	<ul style="list-style-type: none"> <li>PowerPoint presentation on technology based PBL.</li> <li>Printed handouts for future reference.</li> </ul>
Create PowerPoint presentations on WebQuests. Record a WebQuest with Screencast-O-Matic that the coach developed with guidance on the components that make a WebQuest a meaningful use of technology in the classroom, create handouts.	The teachers who teach honor classes will have the knowledge of how to create and implement meaningful PBL activities for face-to-face learning and	<ul style="list-style-type: none"> <li>Coach's video. The coach will provide video of himself during PLC/PL and make the video available to the teachers on the school website.</li> </ul>

	DLD by October 11, 2021.	<ul style="list-style-type: none"> <li>• Checklist for teachers to assess the coach.</li> </ul>
Coaching session to revise the checklist and the video. In this PLC, teachers will have the opportunity to share their views of the video, ask questions and finish their technology based PBL. Teachers will use the same checklist to assess themselves during their implementation of the project.	80% of the World Language teacher will be able to create and deliver technology based PBL lessons and assess the projects correctly by November 24, 2021.	<ul style="list-style-type: none"> <li>• Checklist for teachers to assess themselves.</li> <li>• Checklist for the coach to assess the teachers.</li> <li>• Teachers will assess each other through observations.</li> </ul>
In this PLC teachers will share their videos with the PL and assess themselves and each other with the checklist provided. The goal is to reach 90% of the teachers to be proficient in technology based PBL by the end of the semester.	90% of World Language teachers at NPHS will be able to create and implement meaningful use of technology in the classroom through PBL by December 10, 2021.	<ul style="list-style-type: none"> <li>• Teacher checklist.</li> <li>• Teacher video.</li> <li>• Teacher created technology PBL.</li> </ul>
Student technology PBL will be implemented in the classroom with teacher choice for delivery, either a Webquest, Hyperdoc, etc. Teachers will decide how the student work will be presented and evaluated.	Student engagement and achievement in World Language classes will increase by 35% based on the data collected through canvas by December 24, 2021.	<ul style="list-style-type: none"> <li>• Teachers will take students to the computer labs, check out the laptop carts and/or Chromebooks so the students can perform their projects.</li> </ul>
Students will provide feedback on the activities they perform during the implementation of the PBLs in their classroom.	Student engagement and achievement in World Language classes will increase by 35% based on the data collected through canvas by December 24, 2021.	<ul style="list-style-type: none"> <li>• At the end of each project, teacher will provide a feedback form for the students to complete and assess the PBL. This data will be collected and evaluated with the coach and the teachers.</li> </ul>

**Evaluation Plan**

The evaluation of this project will occur through teacher, coach, and student assessments. First the teachers will conduct self and peer evaluations throughout the development of the project. Through PLC the teachers will acquire the knowledge on how to design, deliver and implement technology based PBL that are meaningful to student achievement, enhance critical thinking skills and contribute to high-level of student engagement.

**Objective One Evaluation Plan**

During the design phase, teachers will respond to surveys and questionnaires to assess their level of knowledge and understanding of the process of creating a meaningful technology based PBLs. Teachers will self-assess, and peer assess during this phase as well. The coach will supply the materials needed for this phase using survey websites and data collection websites and Microsoft Notes. The results will be shared with each PLC to maximize teacher engagement and determine order of implementation, those teachers who feel more comfortable with technology will have the opportunity to assist others during the development phase.

**Objective Two Evaluation Plan**

During the implementation phase, the teachers will either view video of the teachers implementing their PBL or visit the class during their planning for a minimum of 20-30 minutes. The teachers then will give peer feedback with notes on what was observed. These notes should include positive feedback on what was observed and also ways to improve the implementation of the PBL.

**Objective Three Evaluation Plan**

Teachers will watch video of themselves during the implementation phase and self-assess with specific comments on what they have observed. These comments should include positive feedback on what they observed as well as ways to self-improve the implementation of the PBL lessons. These findings will be shared and analyzed by the PLC/PL to find commonalities in positive and corrective actions.

**Objective Four Evaluation Plan**

90% of the teachers will be able to design and implement meaningful use of technology through the use of technology based PBL. We will achieve this goal by analyzing the results of the design, development and the implementation data collected throughout the process. Teachers will receive coach assessed, peer reviewed and self-assessment data to improve on their design, development and implementation of the projects to create a meaningful use of technology environment and raise the level of engagement in the students.

**Objective Five Evaluation Plan**

At the end of the project implementation phase, students will assess the project they had performed and completed. These evaluations should include questions from the start of the project to the final product of the project. Students should receive a questionnaire at the end of their project to evaluate the tasks, the process of the implementation, the evaluation methods the teachers used throughout the implementation process, how technology was used during the

implementation process and the final product of the PBL. This data will be collected and analyzed by the PLC/PL to find commonalities in positive and corrective actions. As a result, based on the Canvas data collected, student engagement and achievement will increase by 35% in the World Language classes by the end of December 2021.

### **Project Timeline**

The implementation of this project will be during the fall semester of the school year 2021-2022. At the start of the project, teachers will be surveyed on their knowledge of technology based PBL and based on their responses PLC sessions will be scheduled to meet the individual teacher needs. The timeline is projected in Table 2.

*Table 2.*

#### *Project Timeline*

Month	Project Item/Activity, or Evaluation Item	Hours
June/July 2021	Coach conducts research on best practices for design, development, and implementation of technology PBL in a World Language classroom.	30 hours
July 2021	Design and develop surveys for teachers on their knowledge of the best practices for the design, development, and implementation of PBL in the World Language classroom.	5 hours
August 2021	Create PowerPoint presentations on WebQuests. Record a WebQuest with Screencast-O-Matic that the coach developed with guidance on the components that make a WebQuest a meaningful use of technology in the classroom, create handouts.	10 hours
August 2021	PLC meeting/coaching session to survey and to deliver the information to teachers. The PowerPoint presentation will be the first deliverable shown.	2 hours
August 2021	Second PLC meeting/coaching session to complete the delivery of the information to teachers. Screencast-O-Matic video shown. Answer questions.	2 hours



September 2021	Record class videos of all periods of coach implementing the first stages of a WebQuest in class.	6 hours
September 2021	Edit videos to show during the next PLC.	3 hours
September 2021	Create checklists for teachers to evaluate the different videos of the early stages of implementation.	2 hours
September 2021	PLC meeting to show the implementation videos, teachers assess coach on the checklists provided. Teachers should bring information for next session on concepts to begin their design of PBL.	2 hours
October 2021	During Professional Development day provide teachers with checklist for the design of PBL, assist teachers in creating a website for the WebQuest shell or Hyperdoc. Teachers will have a choice either a WebQuest or a Hyperdoc for their PBL.	3 hours
October 2021	Continue with assistance of teacher creating their online PBL, answer question.	2 hours
November 2021	Meet with individual teacher to review the development of their PBL, assess and provide feedback. 2 hrs per teacher.	10 hours
November 2021	Evaluation activity: create checklists for the teachers to self-evaluate, and for the coach to evaluate the teacher.	5 hours
November 2021	Assist teachers with the implementation of their PBL. Conduct observations of each teacher in the department for at least one class period. Bring checklist for teacher assessment, record part or all of the period for later self-assessment.	20 hours
November/ December 2021	Meet with individual teacher to assess the video, provide feedback on the lessons observed. Consult with teachers on self-evaluation of their technology based PBL.	10 hours
December 2021	Final meeting with teachers to evaluate the success/needs improvement of the implementation of the technology based PBL.	5 hours
		Total Hours: 130 hours

**Resources Needed**

The following is a list of the resources needed to complete this project:

Physical Space:

- Computer Labs
- Media Center
- Participating Teachers' Classrooms
- Conference Room

Technology:

- Recording Equipment
- Laptop Carts
- Computer Labs
- Website Building i.e. Weebly, Wix
- Microsoft 365
- Google Docs

Human Resources:

- Technology Coordinator
- Participating Teachers
- Administration

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