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PBI Rationale and Analysis

PBI Video Demonstration and Reflection Final

1) Rationale

In our PBI, we explored how the implementation of Google Applications for Educators in the classroom engaged students as they developed content knowledge while also encouraging student collaboration and creativity. As we created the PBI, we explored, analyzed, and critiqued Google Applications that are available for students, and we designed a project that implemented multiple platforms such as Google Slides, Google Docs, Google Hangout, and Google Classroom. Each of these platforms allows educators and students to learn, engage, and communicate in different ways.

At the start of the designed lesson, Google Classroom allowed the teacher to post instructions, examples, and templates in a stream for students to access. Students were assigned groups and worked collaboratively to research five battles of the Southern Campaign in the American Revolution. Students then created a product using Google Slides that portrayed their research, and they worked simultaneously on this presentation. Google Applications offer an excellent opportunity for multiple students to work on one product at the same time, and this

tool transforms group projects by allowing each student to contribute, watch each

other's progress, and communicate virtually as they work.

Our PBI is designed to fit the
criteria of the Technological
Pedagogical Content Knowledge
(TPACK) model. This technology
implementation model requires the
lesson to expose students to a
depth of content knowledge. The
lesson created for this PBI
addressed a multitude of
standards for the North Carolina's
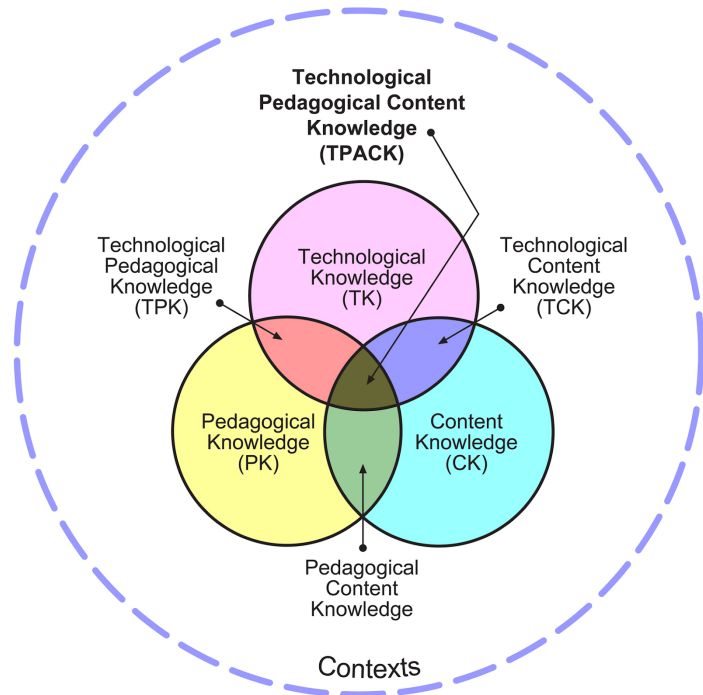
8th Grade United States History course. The lesson guided students in learning

about, independently researching, and evaluating the success of the Southern

Campaign in the American Revolution, as well as teaching them to collaborate

responses with peers. The lesson was specifically designed for students to explain

the impact of economic, political, social, and military conflicts of the American

Revolution (8.H.2.1). Students researched individual battles in the American

Revolution's Southern Campaign using instructor-approved websites. They worked

in teams of five students to share their research about individual battles and

evaluated the success of the Campaign based on their combined information. The

final task given to students that addressed a depth of content knowledge had them

analyze the relationship between historical context and decision-making (8.H.1.5). Students were tasked with analyzing why the Southern Campaign for the British failed and had to give specific evidence from collaborative research to justify the answer. To effectively implement technology in the classroom, the content knowledge must remain the primary focus and the standards and content for each course must be addressed.

The second facet of TPACK is Pedagogical Knowledge. This lesson addressed this criterion by first starting the students with a pretest using Google Forms to assess prior knowledge. This allowed the instructor to address the needs of individual students by going over concepts individually, while also allowing him to anticipate student abilities in the project. Next, the assignment of researching the Southern Campaign battles was split into five manageable portions and given to individual students. This allowed students to master content knowledge for one battle and teach it to the rest of their group. Each student learned about the whole campaign from one another in teams. Google Hangout was used to efficiently manage the classroom because students interacted virtually in their groups rather than out loud. This kept the classroom quiet and manageable so students could focus on their work and the instructor could address individual issues that came up. Students in groups were able to share links, pictures, and other ideas about research with one another using Hangout, which facilitated peer collaboration. Finally, students worked together to unite information about the five chosen battles, and they even helped edit one another's work as they contributed to the

presentation with their newly found knowledge. Google Applications such as Google Slides allows students to simultaneously create a presentation and they can even work on the same slides at once. All of these GAFE features allowed the instructor to use pedagogical methods to create and implement the lesson.

The final criteria for the TPACK model is Technological Knowledge. Students used appropriate technology tools to access, organize, and design products to share content-based information (8.TT.1.1-3). Students used Google Applications such as Google Hangout to communicate, Google Slides to collaboratively display their work and justify their response to the prompt, and Google Forms to share feedback with the instructor. Students were challenged to use technology responsibly without plagiarizing sources, therefore demonstrating digital citizenship skills necessary for the 21st century (8.SE.1.1)

Along with TPACK, this lesson applies concepts from Bruner's "Discovering Learning" constructionist theory. The use of Google applications promotes collaboration, questioning, and it encourages active student engagement by allowing them to chat in Hangout, create presentations in Slides, and research events in order to justify the effectiveness of battles and campaigns. This fostered autonomy in the class to complete individual tasks in order to help move each group forward, and this in turn taught students the importance of responsibility, independence, and motivation. However, as Bruner states in his theory, this method increases the risk of misunderstanding or misconceptions amongst the students, and it is difficult for teachers to detect inaccuracies in student understanding. One way to counteract

this risk is for the teacher to monitor each group using Hangout and meeting face to face with each team throughout the class period.

The Technological, Content, and Pedagogical Knowledge components are intertwined and cannot be taught or utilized in the classroom individually. This lesson also meets the criteria for Bloom's Revised Taxonomy because it scaffolds the lesson so students must remember and understand new information, apply the information in their presentations, evaluate the sides of each American Revolutionary battle, and create a learning project using multiple Google Suite platforms. This lesson ties together content, research, collaboration, digital citizenship, and scaffolding to guide students towards understanding, analyzing, and justifying historical interpretations.

2) Implementation

The implementation of the PBI happened in two parts. The two parts include: collaboration with group members to plan the blueprint and lesson of the PBI, and executing the lesson. Collaboration on the PBI started with answering the question that were provided to us and planning how we would execute the lesson. The purpose of the lesson was to grow students and teachers knowledge with the Google suite through learning about the Southern Campaign in the American Revolution.

When students entered the room, they were instructed to sit down at their desk and log into Google Classroom and wait for further instruction. Once class officially began, the teacher introduced the lesson for the day and the expectations for the lesson. The first activity the students completed was the pretest; the teacher used the

pre-test to see where he needed to go in his instruction based of the previous lesson. The teacher was able to get the data in real time and was able to discuss the data with the students at the conclusion of the test. Most students gained enough information for the previous lesson to be successful in the PBI.

As the lesson continued, students were instructed on how they would communicate during the lesson. The students had to communicate with the teacher and others in the classroom using google hangout which deepened their knowledge of the g-suite. Once communication was established, students moved to another app within the g-suite, google slides, and ventured deeper into the lesson. Each group was given voice and choice as to which battle they would use to create their google presentation. Once students were done with their group presentation, they reflected on the lesson using google docs. While completing the reflection, students had to respond to questions that were created by the teacher. At the conclusion of the lesson students were engaged in the lesson of the Southern Campaign in the American Revolution through the g-suite.

3) Teacher Reflection

We consider the PBI lesson we developed to be an overall success. This is in large part due to the students "buying in" and investing in not only the assignment but also the usage of digital tools, rather than more traditional options.

Students who have had at least some exposure to digital tools were able to quickly catch on how the Google Tools worked. Although each tool served a different

function, the general layouts, button functions, and "look" were all similar. This made them all ideal for middle grade students because of how clean, user-friendly, and easy to operate they are. It was also helpful that all of the tools used could be housed within the larger Google Classroom platform. The integration made it easy to direct students to the different tools, as compared to having them try and self-direct to different sites, forms, and tools. The compatibility of the tools and platforms, along with their recognizability, kept students engaged in the task at hand. They weren't getting frustrated by having to learn a variety of new and different tools (with regards to operation).

Each tool presented its own strengths and challenges. The Google Form was the fastest for teachers to provide students with feedback. By asking a few questions, in different formats (short answer, multiple choice, check the box, etc.) a teacher can watch in real-time as the results come in and offer immediate correction or redirection depending on the students' answers. Starting the lesson in this way made it so the teacher could guarantee that all students had the opportunity to start the collaborative project with the same prior content knowledge, allowing them to dive into the research and learning more seamlessly.

Students seemed to enjoy the Google Hangouts tool the most, as it "felt like texting," which is something they typically aren't encouraged to do in school. It encouraged them to be collaborative, and it was unique in that it provided an equal voice for all students, instead of some students dominating the conversation. Using the chat function was also beneficial in that it supported students in managing their time

better, due to there being less audio/visual distractions in the room during the provided work time. However, it did require a higher level of vigilance from the teacher to ensure that all students were staying focused and on task with appropriate activities, rather than being distracted by the group chats.

Google Slides was an excellent tool because it is so malleable, allowing students to be incredibly creative. Unlike some web tools, the Google Slides are highly customizable. There are a variety of fonts, colors, themes, and animation effects that allowed students to create a product that was uniquely their own, without needing to fit within limiting confines of a web tool. For the most part, students seemed to know what made a "good slide" and what was a "boring slide". This also allows the teacher to see how students want to see content information structured by giving them the chance to show us what makes the most sense to them regarding presentation and organization.

One of the most challenging aspects of a lesson like this is having consistent access to reliable technology in the classroom. The most obvious setback here is that a teacher may struggle to plan for tech-driven lessons if there is not suitable resourcing in the room. But yet another challenge stems from the students' lack of consistent exposure to digital learning. Some students may not have a solid understanding of what it means to collaborate and socialize online in a polite, productive, and positive manner. Other students may struggle with the research component. We observed that a majority of students were relying heavily on the first website they found that semi-addressed their topic, rather than looking for the best

sources. As activities like this one were incorporated in the classroom, students benefited from more prolonged experiences that would help them to hone their ability to critique sources and locate accurate and appropriate information.

Overall, students took ownership of the lesson, which allowed the implementing teacher to serve as a "lead learner" in the room while students directed their learning and each other. They enjoyed working together in a calm environment and learning to manipulate the tools to fit their visions. If a classroom was one-to-one or had more prevalent access to technology, the implementing teacher said he would like to do lessons like this regularly because of the level of student engagement and the active engagement in the classroom.