

## TPACK Instructional Design & Analysis 1

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- Lesson Description
  - Describe your students including the grade level and very briefly explain the lesson.
    - The students that we are aiming for are adult learners.
  - Define the Content - Main content of the lesson?
    - The main content of the lesson is learning digital video editing.
  - Define the Pedagogy - Main pedagogy (instructional strategy) of the lesson?
    - The main pedagogy would be project based learning through completing an assignment using the video editing software.
  - Define the Technology - Main technology of the lesson?
    - The main technology is Windows Movie Maker or iMovie.
- TPACK Specific Questions
  - Pedagogical Content Knowledge (PCK)
    - Define: Project based learning (P) is an effective strategy in teaching digital video editing (C)
    - Describe: Project based learning is promoted in this lesson because the students will have to complete a project using the program they were taught where they will have to meet requirements and deadlines. Project based learning also will show the students have learned the concepts being taught because they will have to turn in or present the project they have created from the lesson.

This pedagogy fits the lesson because as stated before the students will have to show comprehension of the lesson being taught because the students will be completing projects based on the lesson. If the student does not understand a concept they will need to seek clarification on the subject either from notes on the lesson, or from the teacher of the lesson. Students will have a desire to have an understanding of the concepts because they will either be graded on the project they complete, or they will have to present the project.

- Support: Kanter and Konstantopoulos ( 2010) in their Project based PCK research talks about the impact of a project-based science curriculum on minority student achievement, attitudes, and careers. Although this research doesn't talk about using project based research to teach video editing it does talk about the benefit of using project based learning to

increase student engagement in the topics being taught. Project based learning is used to increase student achievement, but when used in combination with inquiry based learning not only did achievement improve but also students interest in the content being taught.

- Technological Content Knowledge (TCK)

- Define: Windows Movie Maker and iMovie (T) are good programs to teach the concepts of digital video editing because unlike the programs Adobe Premiere and Sony Vegas Pro, they are much more basic in their features.
- Describe: Students will find it easier to learn the concepts of video editing if they start on a program that doesn't have such a high learning curve. Once the students learn the basics of editing they can then move on to programs that have more advanced features.

Using Windows Movie Maker and iMovie allows students to learn the skills of digital video editing, even if those are not the programs the students would be using in a professional environment, the programs teach the basics of video editing which then can be translated into more complex programs where the student can continue to build on those skills in an ever learning process.

- Support: This research talks not only about the use of video editing, but also the use of a myriad of technical skills in the 21st century. Students who are willing to use hardware/software in an education setting are more willing to learn new concepts and engage in increasing professional knowledge regarding technical knowledge.

- Technological Pedagogical Knowledge (TPK)

- Define: Using video editing programs like Movie Maker or iMovie (C) facilitate PBL (P) because it creates change in how the educator should teach their students. Having step-by-step visuals that is walked through by the educator is beneficial to the student because it gives them the idea of presenting their knowledge in a creative way, other than writing an essay or creating a poster board.
- Describe: Creating videos is a way to engage in the lesson. It gives the student the creative freedom to express themselves through PBL. Because there's also a PowerPoint lecture on how to use the software, this promotes self-teaching as well. Students are encouraged to explore

various options on editing videos if the PowerPoint isn't enough for them. There are tons of possibilities students can do when creating videos.

- Support: In this study, the tool of having videos in the classroom is becoming a trend to have. Videos increase student motivation, enhance team working and communication skills, and development of deeper learning. According to the survey on the study, 68% of educators saw a positive impact on their teaching experience of using videos in the classroom. For students, 93% saw that there was a positive impact in using videos in the classroom. More than half of educators incorporates videos in their curriculum. The impact of videos can be said to be “continuous”, “integrated”, and “significant”. Using videos has become a well-established activity in today's age. It will continue to grow and increase student engagement in the classroom.
- Technological Pedagogical and Content Knowledge (TPACK)
  - Define: The TPACK of the lesson is knowing that using PBL (P) with Windows Movie Maker or iMovie (T) creates an effective learning environment in teaching digital video editing (C)
  - Describe: Content goal, instructional strategy, and technology in this lesson all fit together. The point of instructional technology is to use technology in teaching. From that you have to have content goals that are aligned with your lesson to ensure that your students are benefiting from your lesson. However, you have to be strategic in the planning of the curriculum for your student because every student is different. You have to have various tactics to create a sense of inclusion within your classroom so that it will be able to benefit all types of learners. With technology influencing various facets of people's lives, it would only be fair to say that it has influenced the way people learn. Technology makes learning more accessible for an individual's specific type of learning patterns; it also makes learning a lot more efficient. With all of these concepts conjoined, they create the overall basis for what TPACK is, and also the definition of what instructional technology is.
  - Support: Research-based evidence to support this?

#### [TPACK CASE](#)

“A FRAMEWORK FOR TEACHER KNOWLEDGE FOR TECHNOLOGY INTEGRATION This is only an excerpt from “ Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge” which was conducted at Michigan State University “The basis of our framework is the understanding

that teaching is a highly complex activity that draws on many kinds of knowledge. Teaching is a complex cognitive skill occurring in an ill-structured, dynamic environment (Leinhardt & Greeno, 1986; Spiro, Coulson, Feltovich, & Anderson, 1988; Spiro, Feltovich, Jacobson, & Coulson, 1991). Like expertise in other complex domains, including medical diagnosis (Lesgold, Feltovich, Glaser, & Wang, 1981; Pople, 1982), chess (Chase & Simon, 1973; Wilkins, 1980), and writing (Hayes & Flower, 1980; Hillocks, 1986), expertise in teaching is dependent on flexible access to highly organized systems of knowledge (Glaser, 1984; Putnam & Borko, 2000; Shulman, 1986, 1987). There are clearly many knowledge systems that are fundamental to teaching, including knowledge of student thinking and learning, and knowledge of subject matter.”

From this excerpt, a lot of research has been conducted as to how TPACK IS truly broken down, and how exactly each segment of TPACK is intertwined and dependent of each other in order to work. They also talk about the importance of the TPACK framework, and how important it is towards the actual technology integration with in modern day education.

#### References

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