

## **Digital Story Telling using TPACK Model: A Case**

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### **Abstract**

With classroom engagement becoming important, teachers are faced with the choice of adopting changes to the curriculum, pedagogy and technology. Digital story telling offers the option of combining all three in a holistic manner. This integration has been encapsulated in the TPACK model offered by researchers. The research paper discusses digital storytelling, the TPACK model and the application using a case study. The application covers the methodology followed using the digital storytelling through project based learning using the TPACK Model and the implications for teachers.

Keywords: Digital storytelling using TPACK, Digital storytelling Case, student engagement.

### **Introduction**

Digital story telling offers the potential of combining curriculum, pedagogy and technology in a holistic manner with numerous student benefits like active engagement, development of skills and developing the student as a person. The integration of the three elements in the TPACK model offered by past researchers holds the key to success in using digital storytelling meaningfully in a classroom situation making learning fun, exciting and exhilarating.

Digital technology is being used worldwide in the educational systems. The paper focusses on teaching learning as one of the core functions which happens as a part of the education services offered. Most teachers will agree to the fact that traditional classroom teaching is getting challenging as the younger generation attention span is shrinking and technology engages them for most part of the day. If classroom teaching can capitalize on using technology, reaching a rather disengaged student group will be possible. Technology can bridge the differences and build a common platform for interaction, dialogue, and learning and enhanced outcomes.

The technologies that can be used are digital cameras, personal computers, and smartphones, apps, video channels, scanners, and easy-to-use media software, platforms for publishing, social media sites. Research studies on the impact of new technologies in the educational sector have proven to be promising as far as enhanced student learning and active engagement is concerned.

Since student engagement is necessary for active class participation, the use of educational technology is becoming an imperative. Digital storytelling can be viewed as an effective approach which draws on technology to meaningfully engage students in learning. However, lack of teacher knowledge and expertise and lack of aptitude to experiment with different pedagogies may prove

to be barriers. The TPACK model helps the teacher assemble the best solution given the objective and outcomes planned.

This paper aims at sharing the experience of creating a course using digital storytelling with the TPACK model (Mathew, Mathew and Mishra, 2009). The paper briefly covers the TPACK framework, its strengths and possibilities and shares an experience used in digital storytelling with the framework to enhance student learning. In a Human Resource subject taught at the undergraduate level final year students had the opportunity to engage in digital storytelling as it related to the field studies undertaken by them. Informal feedback suggested enriched learning and active engagement of students.

The study suggests that digital storytelling can help in creating exciting and engaging learning spaces. The student curiosity is aroused as he/she is encouraged to explore real world problems on the journey to become a HR consultant. It is both a novel experience and achieves enhanced learning because of utilizing all five senses of the student. Since this approach has the potential to enhance student engagement it was adopted for final year students.

### **Literature Review**

Literature review covers: digital storytelling, benefits of digital storytelling, genres of storytelling, elements of digital storytelling, the TPACK as a framework.

Digital story telling may best be described as narrating a personal story with the use of digital technologies like audio, images, video etc (Armstrong, 2003). These stories can be published for consumption and comments of others. The possibility of getting feedback makes a strong case for digital storytelling in student learning. Digital storytelling as a student learning tool encourages thinking, creativity and allows for widespread transmission of their stories of learning.

A few formats of digital storytelling have been identified (Garrety, 2008). Among the formats used are conveying personal stories in traditional formats as narratives, narrative stories of learning experience, narratives about projects, narrations of stories of self-reflection and so on.

Traditional storytelling covers stories that student relate to their life experiences. This develops a keenness to explore oneself beyond the realm of canned knowledge and prompts them to relate to their own selves. Stories of learning encourage them to use already available information and develop knowledge about concepts and frameworks and learn from other persons published work and convey the same in a story format. Project-based learning using storytelling focuses on grappling with real-life problems that require one to suggest a pragmatic solution. Project based learning conducted in groups encourages students to grapple with real life situations and problems, collaborate with others in generating meaningful solutions and convey their stories in a digital way giving rise to an opportunity for others to comment and apply different perspectives. Narratives on social justice and culture issues can also form basis for highlighting the issues and get student to explore the systemic changes required. Practitioners can use digital storytelling as a tool for reflecting and assessing their own experiences and changing them depending on their effectiveness. (Garrety, 2008)

## **Benefits of Digital Storytelling**

Brown, Bryan & Brown, 2005 refer to the skills digital storytelling builds as 21<sup>st</sup> century skills since it develops multiple literacies in creating, accessing and critically evaluating information and knowledge. Digital storytelling offers numerous benefits to students: student communication skills are improved, media literacy improves, students develop initiative and self-direction, multiple perspectives into subject matter are developed, and teamwork opportunity is provided if it is a group assignment.

Digital storytelling as a tool is as instructive as for a teacher it is for student. A teacher can incorporate this as a pedagogy by creating digital storytelling learning tools. Students gain a lot more from using their creativity skills in storytelling as well as conveying the story through the use of multimedia. Students have the opportunity to share their work and gain feedback from others making social learning possible. Since the media used in Digital Storytelling is rich it appeals to students endowed with different learning capacities, styles and preferences, promotes collaboration when the assignment is completed in groups, and instills personal ownership for the learning and the feeling of accomplishment.

Digital Storytelling serves teachers and students equally well. Teachers in particular who are keen on changing student learning experiences, gaining student engagement and creating exciting learning spaces benefit the most. Student who are keen curious and love to learn by immersing in experiences gain the most. The curriculum therefore needs to be designed such that both have a role. The teacher can show a few previously made stories and encourage students to think about opportunities to use the same in their assignments.

The structural elements of Digital Storytelling are useful to build digital stories. The seven elements identified by The Center for Digital Storytelling in Berkeley, California (<https://digitalstorytelling.coe.uh.edu/page.cfm?id=27&cid=27&sublinkid=31>) are a case in point that can help in developing meaningful stories as they cover structure and style. However, the elements can be used flexibly depending on the requirements.

The TPACK model (Mathew, Mathew and Mishra, 2009) brings together subject matter expertise and knowledge of the teacher, teacher's experience with various pedagogy and teachers ability to use technology. This framework enriches Shulman's concept of pedagogical content knowledge by combining educational technology for greater impact.

The TPACK framework covers three bodies of teacher knowledge (Content, pedagogy, and technology) as a set of interacting mechanisms. The interaction of these bodies of knowledge helps produce knowledge flexibly by successfully integrating educational technology used in teaching. A teachers' subject matter expertise, experience of the methods of teaching and learning when blended with educational technology can enhance and encourage better student learning. (Refer Figure 1 for the diagrammatic representation of the TPACK model)

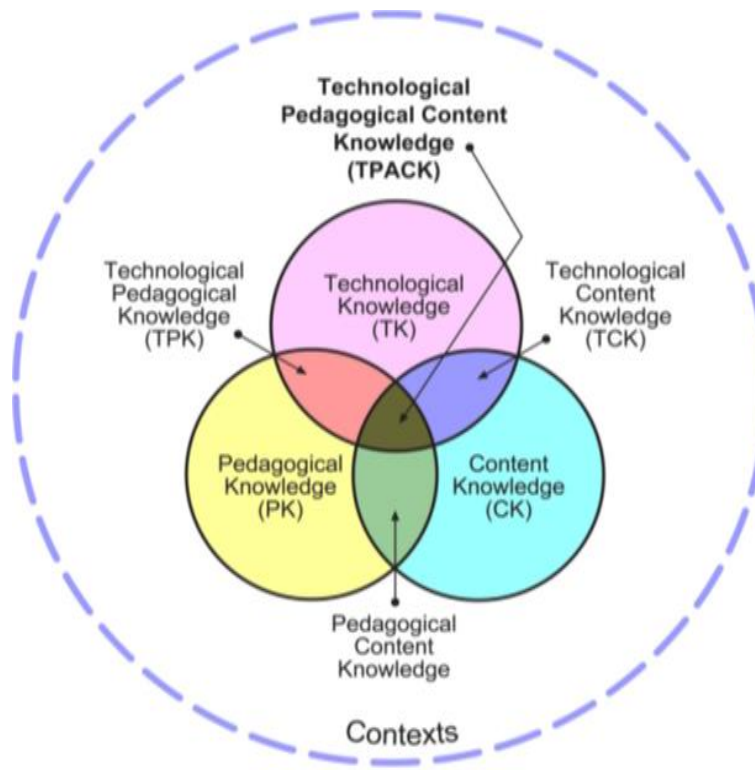


Figure 1: Depicts the TPACK Model. Reprinted from: “What Is Technological Pedagogical Content Knowledge? by Judi Harris Matthew, J Koehler Matthew, Punya Mishra, 2009

### Digital Storytelling using TPACK Model for Teachers: A case Study

The strength of TPACK is that it is dynamic and ever changing. Knowledge is not finite and is always expanding and hence it's a dynamic repository: updated, changed, modified, revolutionized and occasionally disrupted.

Technological Knowledge is moving at a faster pace than Content knowledge. Getting around it is challenging. Here technology knowledge / Skills updating is important. Similarly, for Pedagogical Knowledge there a better and more effective ways of teaching and learning. If a healthy interaction is required to create new knowledge or experiences in students all the above need to be considered necessary. If the three parts of TPACK are well knit it can become an effective basis for teaching with technology.

Working at the interactions of all three for improved outcomes and results have to be clearly strategized by the teacher and the organization. Versatility in all three cannot be achieved without proper skill set offered to a teacher.

*Methodology:* For the purpose of the study students were encouraged to convey their idea and story through meaningful video audio clip which did all the communication. They were told not to make

an oral presentation but use the video to convey the field study findings. They were free to choose two or three key findings and make a digital story of 10 minutes.

Keeping the course objectives and level of student in mind a teacher can stimulate interest in the topic. While a teacher has content knowledge and pedagogical knowledge as these according Shulman (1987) are critical to teacher expertise there may be a lack of knowledge about technology and its possibilities.

That there is a huge potential to capitalize on new forms of media that are both useable for enriching pedagogy and enhancing active student engagement should be recognized.

### **Case Study**

In the Human Resources class all students were encouraged to convert field projects undertaken into short storytelling videos which covered the topic in brief, the students point of view, the key field research findings in some detail in a narrative form, recommendations to the organization and salient aspects of the student's journey in becoming a HRD consultant. The digital stories were published on google classroom. The students of each group also posted quizzes for other student teams to take and teams were encouraged to comment on the digital stories online. The feedback suggests the student enjoyed the digital storytelling project based learning and were highly engaged

Some drawbacks were knowledge sharing leads to copying of material especially if the assignment has received positive feedback. Further course prerequisites should be specified like subject knowledge from previous courses taught which are linked to the current course.

#### *How Did TPACK Help?*

Content knowledge was present with Teacher and students during the course were provided adequate content knowledge. The Pedagogy chosen was a field study (referred to as digital storytelling project based learning) involving data collection on validated Human resource instruments like: Big five, OCATAPCE, Egograms in Transactional Analysis. One of the studies was on Personality profiles of successful vs not so successful sales people in an electronic store in the city. Another consisted of mapping senior managers' egograms in a large construction company. Transactional Analysis Egograms were mapped to understand how they dealt with the staff.

### **Implications**

Success in Digital Storytelling using TPACK rests on a three legged stool: Knowledge about content, pedagogy and technology for educational use. When a course is built on conceptual aspects only it may be difficult to obtain high student engagement levels. So the courses must specify prerequisites i.e. to use project based learning some prior knowledge of the subject matter from courses taken in the past is necessary. A conceptual course is likely to meet with limited success. Field work should be ideally tied to project based learning

## Conclusion

TPACK emphasizes a three-way interaction between the parts identified as contributors to the core of teaching and learning and digital storytelling enables one to harness the power of all three in constructive ways. Teachers can tap TPACK as a resource to generate ideas for teaching which may be encapsulated in the structure of digital storytelling. Once the teacher articulates the learning outcome for students a digital storytelling path can be chalked out. Teachers must learn to flexibly navigating the three spaces in knowledge generation. Thus, teachers need to develop fluency in formulating effective solutions to deliver learning outcomes. TPACK can be successfully used with digital storytelling to create meaningful learning.

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