

### I. Title of Project

Wired Wednesday – Using Technology in the Classroom with 1:1 Devices

### II. Curriculum Topics, School Name, Number of Educators, Grade Levels

The school that I presented my professional development session to is a K-12, rural school called Tina-Avalon R-2 School District and is in Tina, Missouri. There were sixteen teachers representing all grade levels and content areas, and 1 administrator present for my presentation. There were no specific curriculum topics presented at this PD. It was my goal to present tech tools that were not content specific in order that they could be used in a variety of ways with any content area, and used to teach any curriculum topic needed. This school district has had little technology professional development and is new to 1:1 devices. They were eager to learn new teaching strategies using their new technology. Names and contact information for 4 of the educators that attended my PD are as follows.

Sheila Hesler	<a href="mailto:shesler@tinaavalon.k12.mo.us">shesler@tinaavalon.k12.mo.us</a>
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### III. Standards Addressed

My school district follows the ISTE Standards for incorporating technology in each classroom. Our district technology goal for the Continuous School Improvement Plan is as follows:

Goal 1: Develop and enhance quality educational/instructional programs to improve performance and enable students to meet their personal, academic, and career goals.

Strategy 1: Teachers will demonstrate high levels of teaching competence, implementing best practices in curriculum design, instruction, assessment, and in the use of technology to increase student achievement.

ISTE Standards - International Society for Technology in Education

Empowered Learner - Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.

1a - Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

1b - Students build networks and customize their learning environments in ways that support the learning process.

1c - Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

1d - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Knowledge Constructor - Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.

3a - Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.

3b - Students evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.

3c - Students curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.

3d - Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

Creative Communicator - Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

6a - Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.

6b - Students create original works or responsibly repurpose or remix digital resources into new creations.

6c - Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.

6d - Students publish or present content that customizes the message and medium for their intended audiences.

#### IV. Summary of Project

When I was given the challenge to do a professional development presentation for the STEM Leadership class I thought I should probably try to show other teachers what I feel I do best as an educator. I should present on a topic in which I felt comfortable and confident. Initially I intended to present on Coding and Robotics, but after receiving feedback from the pre-presentation survey, the majority of teachers felt they needed help implementing new technology platforms into their classrooms such as Flipgrid, and Edpuzzle.

#### V. Pre-Question Survey List

Likert Scale questions ranging from Strongly Agree to Strongly Disagree

1. When using technology students are more engaged and there are fewer discipline issues.

2. When using technology students are creating products that show a higher level of learning.
3. I feel that I need more professional development opportunities before implementing new tech tools.
4. When using technology, I fear that students are prone to distractions from games and other off-topic activities.

#### Checkbox Questions

5. Click the box next to the type of technology PD you feel you could use the most to enhance student learning. Coding and Robotics, Tech Tools such as Edpuzzle, Flipgrid, Adobe Spark, Nearpod, and Podcasts, Google Classroom and the Google Suite, Other
6. Click the box next to the tech tools that you are currently using in your classroom.

#### VI. Brief Description of the Actual Professional Development Training

I was fortunate to have done my presentation on Wednesday, March 4 at a regularly scheduled after school staff meeting, before the coronavirus became an issue for Missouri. I presented at a very small, rural school, literally in the middle of many corn and soybean fields. For my presentation, I focused mainly on teaching strategies to raise the use of technology from a substitution tool to the redefinition level where students are creating something that couldn't be done without a tech tool. I began by telling the group a little about myself. My sister-in-law was a part of the group, so I took the chance to fill them in on a few humorous things about their fellow educator. I told them my "credentials" to show them why I was somewhat qualified to take their valuable time presenting at a staff meeting. I finished this part with a brief description of the Endeavor program.

Next, I showed a short video about the SAMR model, a framework developed by Dr. Ruben Puentedura. This model describes the use of technology in classrooms, and how with careful thought and implementation students can move from using 1:1 devices as a substitution for pen and paper, all the way up to the redefinition level. At this level students can create something like a podcast and receive feedback from students on the other side of the world, something that couldn't be done without the use of the tech tool.

I included a slide in my presentation with each component of the Google Suite, complete with links to tips and tricks for how to put them to use in their classrooms. I knew that they were a Google school and had been trained on the use of Google Classroom. Because of this previous training I didn't want to spend too much time during the staff meeting with Google apps, but wanted to provide resources to anyone who might be interested in personal PD.

The four tech platforms that I chose to demonstrate were Edpuzzle, Flipgrid, Anchor Podcasts, and Nearpod. All of these were chosen based on my own experience with them in my classroom, and upon the pre-presentation survey results. I had also discussed with my sister-in-law what she felt the group needed in tech PD based upon conversations with her fellow teachers, comparing these ideas to what was indicated in the survey. I began this part of the PD with an example of a how Edpuzzle can be used to introduce new content, review a concept, or just give students more practice with difficult material in a different format. Then I showed

examples from my students of both Flipgrid videos, and a podcast. Then I introduced the group to Nearpod, and the wide selection of free content available in the Nearpod library.

Finally, I told the group that it was time to pick one or two of these tech tools and get to work. I assured them that I would be right there to help if needed. We had approximately 20 minutes left in the scheduled hour for the staff meeting. The majority of the group were ready and willing to pick a tool and figure out ways that they could use it in their own classroom. Flipgrid was a favorite. I helped several teachers set up their classes and create their own grid. I had provided some snacks, so teachers, tired from a long day at school, snacked and worked for all of that time. Some even stayed after to explore the Nearpod library.

## VII. Brief Outline of the Activities in the Professional Development Session

### I. Welcome and Introduction

A. Personal – Who am I?

B. Professional

a. teaching experience

b. teaching positions

c. degrees

d. Endeavor program

### II. SAMR model

A. Why use technology?

### III. Google Suite

A. Google apps

B. Links

a. tips and tricks

b. assignment ideas

c. organization ideas

d. feedback ideas

### IV. A Few of My Favorite Things

A. Anchor Podcasts

B. Flipgrid videos

C. Nearpod

D. Edpuzzle

V. Coding and Robotics (I had iPads and Cue robots available, but ran out of time, and did not have teachers interested them)

VI. Work time

VII. Thank you!

## VIII. What NASA mission data or Endeavor resource was used?

The Endeavor resource that I relied upon was the Coding, Robotics and 1:1 Devices class taught by Dr. Sharon Mistretta. This class was invaluable to me as I prepared for my professional development presentation. I felt confident in doing either PD on Coding and Robotics or 1:1 Devices, choosing the latter due to teacher interest and perceived need.

## IX. Follow-up activities & post- survey questions

I emailed the group of teachers that attended my professional the following follow-up questions.

- Likert Scale Questions – Strongly agree → Strongly disagree
  - o I am satisfied with today’s presentation.
  - o The session was well planned and interactive.
  - o Time in the session was sufficient to allow learning and practice new concepts.
  - o Session content and strategies will be useful in my classroom.
  - o Session content and strategies will be useful in helping students meet learning objectives.
- Written Response Questions
  - o If you weren't satisfied with any part of today's session please explain why.
  - o Additional Comments

## X. Outcomes. Final Data Collection and Analysis

Thirteen of the sixteen teachers that attended my PD responded to the follow-up survey, a Google Forms questionnaire. Their responses are as follows:

1. I am satisfied with today’s presentation.
  - Agree – 53.8%
  - Strongly Agree – 46.2%
2. The session was well planned and interactive.
  - Agree – 38.5%
  - Strongly Agree – 61.5%
3. Time in the session was sufficient to allow learning and practice new concepts.
  - Neutral – 2%
  - Agree – 46.2%
  - Strongly Agree – 38.5%
4. Session content and strategies will be useful in my classroom.
  - Agree – 46.2%
  - Strongly Agree – 53.8%
5. If you weren’t satisfied with any part of today’s session please explain why.

The new materials and new ways to incorporate the technology.

I just wish there was more time.

No problem.

I thought you did awesome!

Satisfied.

I learned about a few new uses of the technology I hadn't known about.

## 6. Additional Comments

Great job!

Thanks for coming and sharing!

You did a Great job! Thanks for sharing.

Thank you for coming and sharing with us!

Great stuff!

Great job! I hadn't heard of those apps!

Upon first reflection, immediately after leaving the PD session, I felt really good and positive about it. The teachers responded to me well, seemed happy to be there, and weren't looking at their watches. The time we had to work with the tech tools seemed productive. The post-presentation survey showed very positive results. I was a little discouraged when I took a look at my pictures and realized that one teacher was grading papers. When I thought about this it made sense. This was a required PD, all staff were required to be there for the after-school staff meeting, unless they were coaching and had practice. This made me think about the Jenkins (2010) article that stated, "the literature suggests that professional development should be voluntary." The one teacher that was not engaged in my PD hadn't chosen to be a part of it. Jenkins also suggested that teachers should be involved in the decision-making process for professional development topics. I had asked the principal of the school about doing this presentation, so he alone determined the topic for their PD. This is supported in the Lustick (2011) where he states that professional development should "involve teachers in the planning and implementation process."

Overall, I feel that the professional development session was successful. I won't let one teacher out of sixteen determine the effectiveness of my PD. Another way that I can determine its success is how the teachers are currently using the tech tools that were presented. I have been told by my sister-in-law (my eyes and ears) that many of the teachers are using Flipgrid to communicate with their students during Missouri's stay-at-home, distance learning situation. Another teacher is using Anchor podcasts to record her own podcasts of her reading "The Outsider" for her students to listen to as they read along. I knew how great these tools were having used them in my own classroom, but until you've used something yourself you don't truly understand their value. These teachers now have first-hand experience, and are developing their own expertise in using these tools. I'm sure they will continue to use these and others like them for years to come.

I would have liked to have had a chance to do a follow up interview with some of the teachers involved in my PD, mainly to have a more in-depth reflection on what was good, and what could use improvement. At this point, with the increased stresses on teachers due to distance learning, I won't have the chance.

#### Citations

Jenkins, A., Yoshimura, J. (2020). Not another inservice! Meeting the special education professional development needs of elementary general educators. *Teaching Exceptional Children*. 42(5). 36-43.

Lustick, D. S. (2011). Experienced secondary science teachers' perceptions of effective professional development while pursuing national board certification. *Teacher Development*. 15(2). 219-239.