Online Tools for Active In-Class Learning

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INTRODUCTION

All around us, we witness the pervasive use of technology, from advancing social media platforms to voice-controlled computers and phones. While technology continues to make progress in western society, it has also impacted the way some students are taught in schools around the country. In a 2009 study, 97% of teachers reported having access to a computer in the classroom daily (Gray, L., Thomas, N., & Lewis, L., 2010). In an education market study of 500 school educators, administrators, and IT staff, 78% reported that technology has an overall positive net impact on education (CompTIA, n.d.). In many instances, technology is used to motivate and scaffold students' understanding and to offer an alternative approach to traditional activities and lessons (Higgins & Spitulnik, 2008).

The purpose of this poster is to share examples of my instructional use of technology integration in Education courses with pre-service educators at Marian University. This implementation has provided opportunities for students to use technology to analyze moral and ethical issues in education, identify multiple approaches to solving a problem through multiple perspectives, and communicate effectively.

CONTEXT

The educational technologies discussed in this poster presentation were integrated in the following courses during the Fall 2019 semester:
- EDU 307: Science of Learning
  - 2 Sections
- EDU 419: Best Practices in Teaching
  - 1 Section

Most students were equipped with their own laptop of smart device. When necessary, students were provided advanced notice of technology requiring a laptop in class. Tools were primarily used to engage students in discussions, to collect data, and to share feedback.
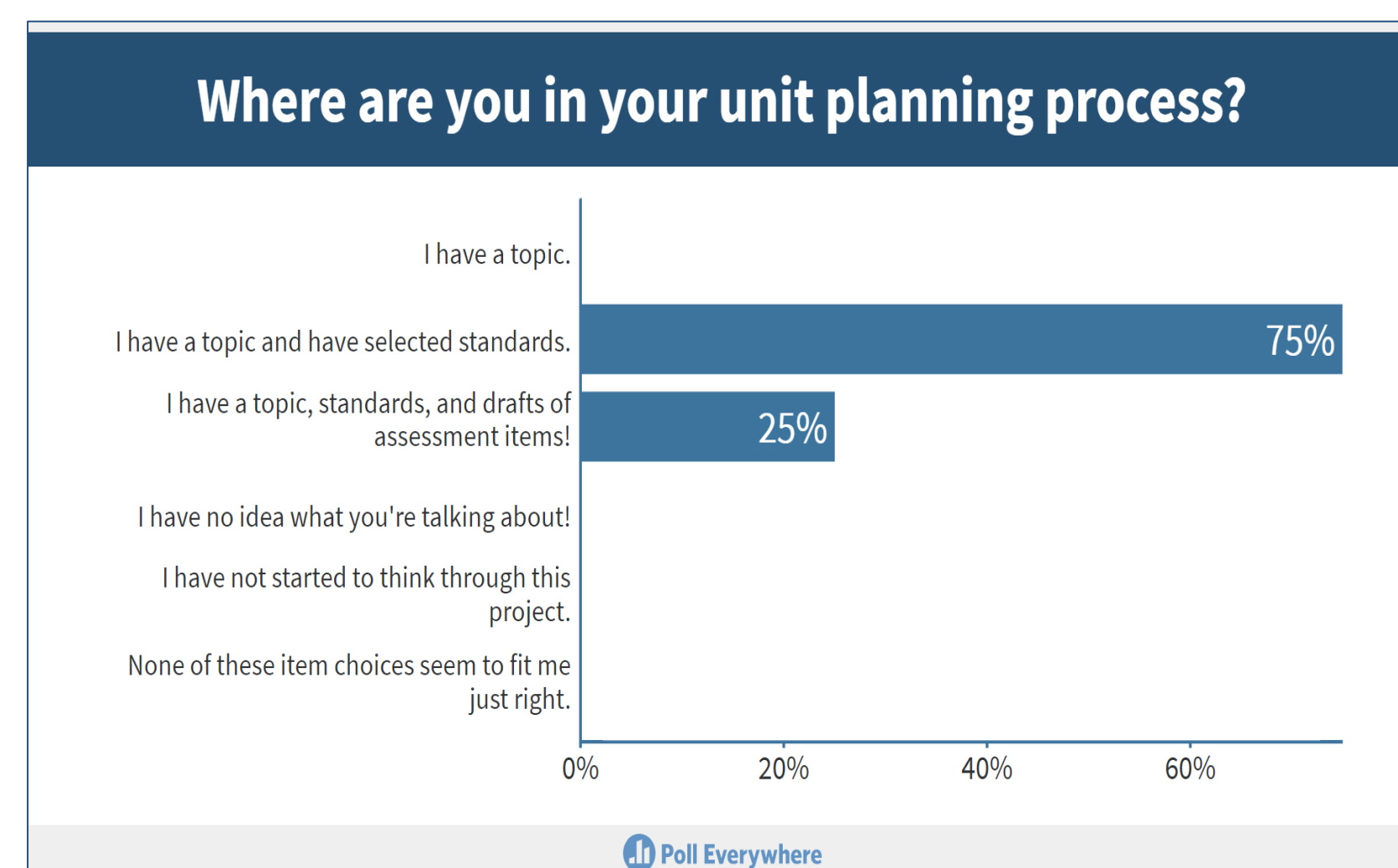

SURVEY TOOLS

Google Forms
- Uses: Beginning of semester student information surveys and syllabus quizzes.
- Pros: Easy to use; sharable links available immediately; free to use with Google/Gmail accounts
- Cons: Not connected to MU accounts/credentials

Office 365 Forms
- Uses: Very similar to the uses of Google Forms
- Pros: Can use with Office account (Outlook credentials); saves automatically in your One Drive folder
- Cons: Not as easy to use as Google Forms; difficult to modify questions after they are written

Poll Everywhere
- Uses: Used to engage all students during a warm-up or exit question.
- Pros: Can integrate into PowerPoint/Google slides; multiple uses include surveying and assessment; can use a Google account to register; immediate feedback; students can respond through multiple methods; selected and open responses allowed
- Cons: All students will need access to a smart device or computer; free version is limited to 40 responses per activity
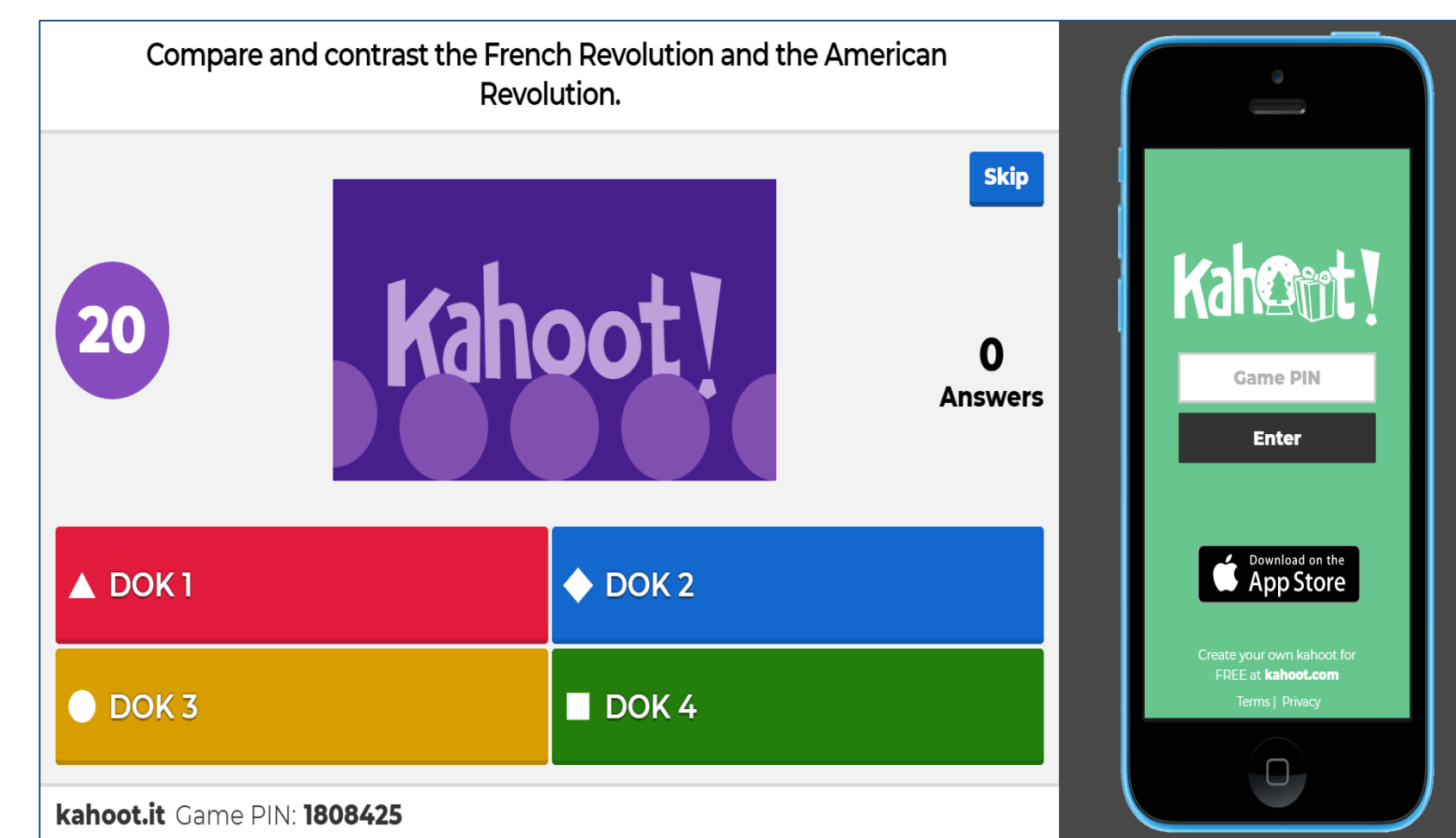

ASSESSMENT TOOLS

Plickers
- Uses: To deliver quick assessments with limited use of technology.
- Pros: Free for a limited set of questions; immediate feedback; increased confidentiality in responses
- Cons: Limited to selected response/multiple choice questions; requires some setting up to track student responses; will require instructor to download app on smartphone

Kahoot!
- Uses: Quick in-class assessment platform that is very engaging, even for college-aged students.
- Pros: Fast and easy to make; highly engaging and competitive; can quickly communicate the directions for signing on; able to make subtle modifications for assessment purposes
- Cons: scoring is not clear; limited to selected response/multiple choice questions; all students will need to have a smart device (or computer) to participate

Canvas Peer Review Feature
- Uses: Used to assign peer reviewers in Canvas on first drafts of assignments.
- Pros: Students can be assigned automatically or manually; instructor can monitor feedback; students reported feeling "official" when providing feedback; students have an electronic record of feedback in Canvas
- Cons: Students cannot edit scores when using a rubric after they have saved the assignment; quality of feedback varies for each student
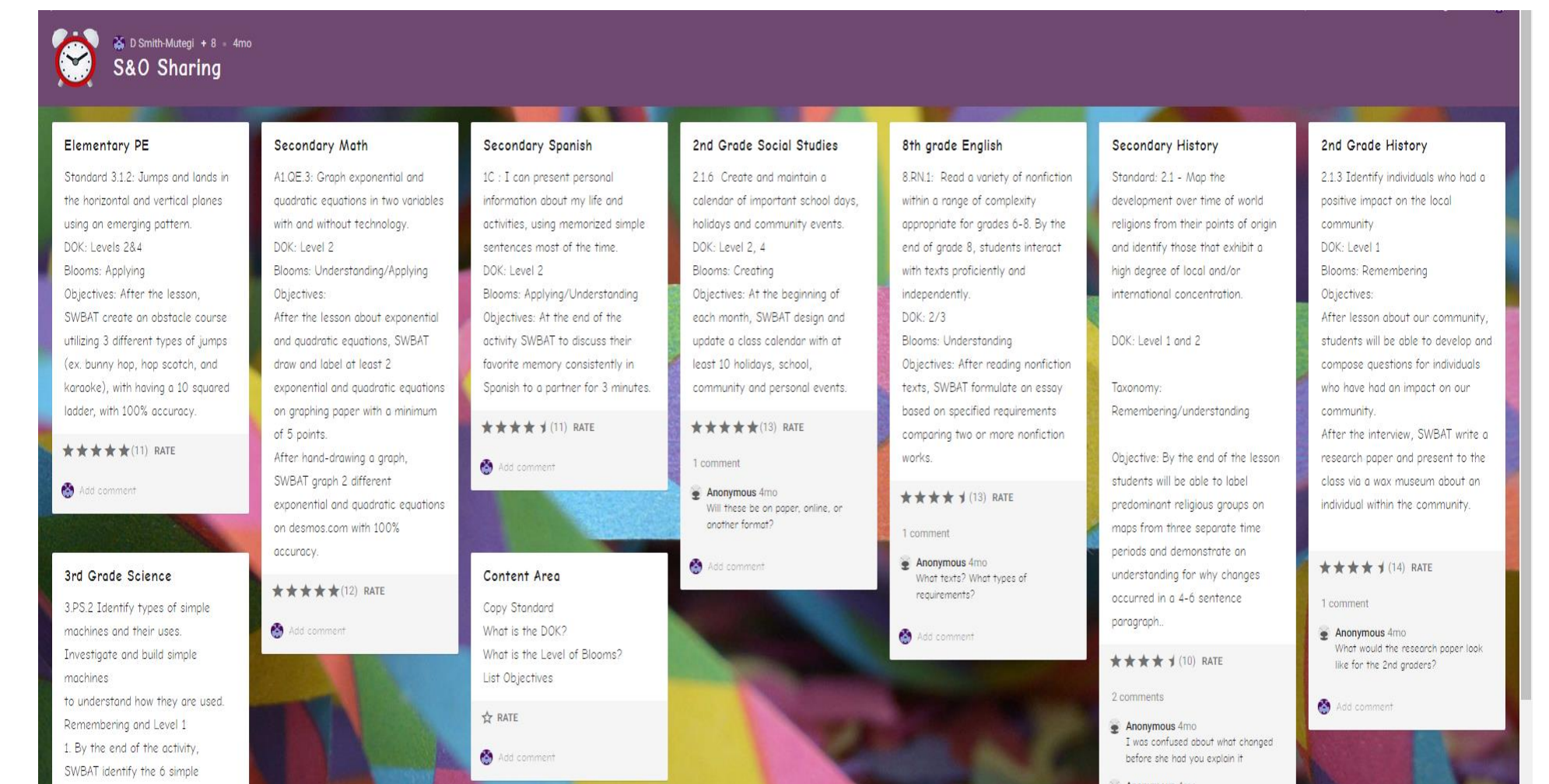
MULTI-USE TOOLS

Padlet
- Uses: Any activity that would require poster paper; used to share ideas and critique/provide feedback during class discussions.
- Pros: Free; easy to share and edit; downloadable in PDF; students can like, comment, rate, etc.
- Cons: limited to three Free Padlet pages

Google Docs
- Uses: Used to collaborate on in-class assignments and scheduling meeting times.
- Pros: Integrates with Canvas; has multiple uses; real-time
- Cons: must set up notifications in order to receive updates; when using the link to edit option, you cannot determine the author

Popplet
- Uses: After reading an article, students created concept maps to communicate ideas they shared as a group.
- Pros: Free; quick; great way to add variety to typical group discussion and sharing; can be saved after opening an account; easy sharing via email
- Cons: limited designs; does not save without an account leading to lost work and frustrated students

References:
CompTIA (n.d.). IT Opportunities in the Education Market. Retrieved February 14, 2016, from https://www.comptia.org/resources/it-opportunities-in-the-education-market
Gray, L., Thomas, N., and Lewis, L. (2010). Teachers' Use of Educational Technology in U.S. Public Schools: 2009 (NCES 2010-040). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.
Higgins, T., & Spitulnik, M.W. (2008) Supporting teachers' use of technology in science instruction through professional development: a literature review. *Journal of Science Education and Technology*, 17:511–521