Technology and Communication (CPSEL 3 & 4)

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EDA 612: Assignment 4: Technology and Communication (CPSEL 3 & 4)

**1. Reflect on and describe how technology has changed or impacted your school or district in the past few years. Please choose at least three areas below and answer the second question.**

* In what ways have recent advances in technology benefited your school or district, and the stakeholders (including teachers, students, parents, and administrators)?
* What evidence is available to show how technology has helped improve student learning at your school or district?
* How has technology helped stakeholders with communicating important and relevant information?
* **How can the technology that your school already has access to, be leveraged to better serve your school and/or the stakeholders?**
* **What technology is on the horizon that as an administrator, you believe will be helpful or potentially harmful for student achievement at your school or district?**
* **How have instructional practices changed due to technology?**

**2. Finally, include which technologically based tool(s) or program(s) you would like to add to your school or district’s “Technology Wish List” in the next year or two and explain why?**

**How can the technology that your school already has access to, be leveraged to better serve your school and/or the stakeholders?**

The advent of technology has changed the expectation of the educational landscape, providing more comprehensive accountability, objective measures for data-driven instruction, and offering innovative instrumentation and methodology to enhance teaching and learning pedagogy impacting instructional techniques affecting academic performance, hopefully.

Digital computation, if the instrumentation and methodology are sound, can use the divinity of number to drive data-driven instruction that can stratify subgroups, identify trends, and guide inferential decisions impacting a school’s SPSA development. Since viable data is not influenced by implicit bias, the objective results are irrespective of socio-cultural attributes within quantitative measurements and inferential in qualitative findings. Advancements in data analysis and learning analytics enable educators to gather insights into student performance and progress, keeping decisions objective with reduced implicit bias or subjective interpretation. As stated, by analyzing large datasets and studying meta analysis research, educators can identify trends, pinpoint areas for improvement, and tailor instructional strategies to meet individual learning needs effectively.

Technology, if implemented with fidelity, can transform how and why students learn.

**What technology is on the horizon that as an administrator, you believe will be helpful or potentially harmful for student achievement at your school or district?**

The School of Business and Tourism offers a Career Technical Education (CTE) class called Virtual Enterprises (VEI) with integration of augmented reality (AR) and virtual reality (VR) technologies. For example, VR/AR headsets and software can create a digital world that can emulate a myriad of virtual realities that can mimic possible career choices and/or instructional performance to practice technical skills practiced in VR to help prepare in the “real world.” For example, if you desire to prepare for a career as an auto mechanic, you can place the headset, activate the mechanic “game” and perform specific skills like changing oil in a digital world. This is not only practical but highly engaging for the students to be learning while playing and engaging in an immersive learning experience.

A possibly dangerous technology that might have negative effects on student learning or performance is the use of adaptive learning programs powered by artificial intelligence (AI). AI’s ability to quickly learn individual patterns, preferences, and learning modalities to customize personalized instruction sounds incredibly differentiated; however, without “real-world” practical skills that come through productive struggle this will fragment the learner’s comprehension and application by not providing a viable marriage between declarative and procedural knowledge. Also, without the productive struggle that comes with trial and error, metacognitive skills will not be developed to identify impediments to learning that might lead to a comprehensive understanding of the skill or content to be mastered. For example, if AI provides responses with correct subject/verb agreement, identifying how to correct the grammatical math will be not a practice or a theory in that the learner wasn’t part of the original construction.

**How have instructional practices changed due to technology?**

High-speed internet and cloud computing has changed instructional practices allowing students access to educational resources from anywhere, anytime. Platforms like Google Classroom, Canvas, Blackboard, and Moodle provide collaborative opportunities, increased communication, and assignment submissions and grading with timely and accessible data and feedback. Also, mobile learning applications have provided access for students to learn on the go, utilizing smartphones and tablets as powerful educational tools (e.g., e-books, educational videos, or digital assessments, and online tutorials).

LAUSD offers a plethora of digital learning resources to the point of saturation. With the complexity of a chosen learning platform, offering varied choices that can be ultimately redundant can lead to frustration in learning different programs while impacting the integral use of a chosen or mandated program with depth and integrity. This is a personal frustration that can impact administrative instructional leadership when district mandates derail a locally designed program with specific tools or instruments vetted by the school site. For example, LAUSD has chosen a new Lexile program for literacy and numeracy (i.e., i-Ready) that technically was better performed by other platforms already accessible and a previous partnership which owned the original Lexile metric developed by Metamatrix. This unwanted and unnecessary change leads to PD’s designated for training and a learning curve that frustrates the efficacy of instruction. Presently, the use of i-Ready is sold to the faculty as adaptive technology that can provide digitally-driven lessons differentiated for the learner. By the time the initial training and implementation of benchmark diagnostics happen, the faculty are not given the protected time to learn how to take the initial data to provide true differentiation.

 **Which technologically based tool(s) or program(s) you would like to add to your school or district’s “Technology Wish List” in the next year or two and explain why?**

Vertical curriculum alignment in ELA and MATH is an instructional concern. A unified curriculum would help with collaborative benchmarks that can build and support with pre and post-requisite courses. For Math, the full integration and support services of Illustrative Math would be a choice as the core curriculum mainly because the intent focus on real world applications to instructional lessons. The program is designed to address cognitive attrition with specified modules built into each lesson. For example, the teacher begins with a warm-up that offers direct instruction and modeling expectations followed by student-centered instruction with teacher facilitation. The entirety of the lesson rotates incrementally offering opportunities for teacher feedback and guided instruction with lower teacher-to-student ratio. The program is not so heavily dynamic in a digital context, but relies on a balance between actual practice via the consumable and digital content to complement the core instruction providing personalized artifacts.

The ELA department is taking the autonomy of a pilot school to its full extent without much rigor. The adopted MyPerspectives curriculum that offers an online version mirroring the consumables is quite cumbersome to use and not efficient in accessing the platform since it is not fully integrated with the adopted Learning Management System (LMS) Schoology gateway. This means that the ELA department uses the LMS only to be redirected back to MyPerspectives. It requires an additional login and multiple clicks and processing to finally get to an imbedded lesson that can often timeout due to loading large video or graphic files. The programming is a problem so when the ELD classes requested new textbooks, LAUSD limited the typical order from EDGE ELD books to larger ELA curricula that offer ELD modified lessons and supports. The two main choices were MyPerspectives, of which is described above, or Studysync by McGraw Hill. I’ve used both and the Studysync curriculum integrates better with the LMS Schoology by adding direct application software as dedicated resources and a hyperlink in each class materials directly to the website for quicker and more efficient access. I’ve taught this program before, and it has the capability to use 3rd-party integrated plugins to extend the application of the program for ease of use and to accommodate ELD and SWD (Student with Disabilities) modifications for differentiated instruction.