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Unit 5 Assignment: Technology-Learning Initiative

Part I

The initiative I would like to put in place is a 1:1 computer program in my school. My interest is in addressing and hopefully solving two problems. The first problem I would like to address is computer literacy. I have noticed that many students in my school are familiar with social networking and other "fun" applications and media through the technology available to them, including phones, iPods, iPads and computers. They are in many ways "natives" to the social technology world. However, they are often at a loss when it comes to using technology beyond these purposes. My students really struggle when needing to use technology for academic purposes or even creative purposes. Beyond communication with friends and family, my students are very shortsighted about the opportunities to express themselves that technology can offer. I would like my students to become much more fluent in the broader opportunities that technology can offer them, and the best way to do this, in my opinion, is to make this technology significantly more accessible to them.

The second, and more immediate and pressing, problem I am trying to solve is that of different learning levels, skills and interests in the same classroom with only one teacher. Because my school is small, there are no differentiated levels for classes. All Special Education students, English Language Learners, gifted students and general education students are in the same class. This makes it extremely difficult for teachers to modify, differentiate and accommodate for the vast array of learning abilities and styles in one classroom. A 1:1 program would allow teachers to plan lessons and activities that better addressed students' individual needs by making available more programs, tool, and web 2.0 opportunities.

Ideally I would like to use laptop computers, because students are more likely to encounter them on a day-to-day basis in the real world. If the funding is not available for that, I would like students to have access to iPads or other tablets. There are a number of technology "tools" I would like my students to work with as they approach learning in this re-envisioned classroom, such as Microsoft Office, video making, and website production. These are all technologies that can be used to modify the learning experience while still allowing students to develop the content-based skills needed.

There are many factors that will be at play as this initiative is introduced. As mentioned above, many of my students have limited experience with the vast array of options available through technology, and therefore will need to be viewed as newcomers. Many of them have little personal experience with computers or tablets, as their families are relatively low-income. Our students also have varying learning levels and languages, and therefore we will need to take into consideration how to introduce and train all students in these new technology tools. Additionally, teachers will also need to be viewed as newcomers to the 1:1 scene, as many of them likely will not have had much experience using technology as a teaching tool. Because our school has been so limited with available technology, this is not something our teachers have likely stayed up-to-date on and therefore detailed and continuing professional development will be needed to ensure teacher comfort and skill within the initiative. Our school itself is well suited to this initiative, as it is quite small (about 100 high school students), and therefore the introduction of the program could be monitored quite closely.

Part II

Category	Description	Requisite Knowledge
PK	Knowledge about pedagogy and instructional strategies	Knowledge about the outcomes and goals desired by lessons and activities. Knowledge strategies to best differentiate and accommodate for different learning styles. Knowledge of how to make learning and understanding authentic and relevant to students. Knowledge in the different strategies and techniques to use for Special Education, ELL and gifted students, as well as how to differentiate for students' needs.
CK	Knowledge about content in teachers' curriculum	Knowledge in content-area instruction and information in subject areas. Knowledge of the specific "facts, concepts, theories and procedures" of content-area (Mishra and Koehler, 1026).
TK	Knowledge about technology and how to use specific technological tools	Knowledge about the specific programs, features and operating systems of laptops and/or tablets and how to use them to reach desired educational goals. Understanding of technologies considered crucial for students to be successful in beyond their social tools and apps. Knowledge in how to maintain these technologies through updates, downloading programs and applications, and troubleshooting. Additionally, knowledge of new and changing features and updates available.
TPK	Knowledge about how to teach with specific technologies	Knowledge of the abilities and capabilities of computers and/or tablets for teaching, particularly in how to use the technologies to improve and enhance teaching strategies and techniques. In other words, how to best use the technology to best educate individual students in the classroom. Knowledge in how to adjust and adapt teaching styles and techniques to best fit alongside the technologies in order to make the best of both. Additionally, knowledge in how to teach students how to use the new technologies successfully and correctly.
TCK	Knowledge about how technology aligns to various curricular content or concepts	Knowledge of how to use the technology to enhance the content being learned. Knowledge and understanding of how the process of learning content can be *improved* by the

		introduced technology—not simply changed or recreated.
PCK	Knowledge about how to teach specific curricular content or concepts	Knowledge and understanding of what strategies and techniques are best suited to teaching specific content-area knowledge. Understanding of what areas of knowledge will be difficult or easy to learn, as well as students' prior knowledge (Mishra and Koehler, 1027). Additionally, the knowledge of what students bring to the learning table—what do they already know, what might they struggle with, and how to address those confusions and needs.
TPACK	Synthesized knowledge about how to use technology and instructional strategies to teach specific concepts as well as about how the use of technology changes our understanding of the content and of how to teach the content	Knowledge and understanding of the relationships between content, pedagogy and the technology of laptops and/or tablets. Understanding of how to use this knowledge to create beneficial and effective lessons and learning experiences for students at all levels within the same classroom. Knowledge in how the introduction of technology-based learning activities can combine with teaching strategies and content-area knowledge to create a successful learning environment for all students in the classroom. This includes detailed understanding of all the above knowledge categories, and how they can interweave and combine in the classroom.