Training Analysis / Needs Assessment

EDTC 6465 Design of Technology Supported Learning Environments

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Engaging the Pre-K Student Through the Use of Technology

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Teachers hold varying beliefs and attitudes about the value and effectiveness of incorporating technology into their teaching (Hampel & Stickler 2015). Teacher education must consist of on-going training to help teachers develop their pedagogical awareness of how Information and communications technology (ICT) can enhance learning, especially in formal school settings (Germain-Rutherford & Ernest 2015).

**Goals** The name of the purposed training is “Engaging the Pre-K Student Through the Use of Technology” and the organization goals driving this training is based the current Instructional Evaluation System for Volusia County teachers. The assessment system domains addressed are: **Domain 1: Planning and Preparation. Component 1d Knowledge of Resources:** teachers display knowledge of resources – not only Teacher displays awareness of resources — not only through the school and district but also through sources external to the school and on the Internet — available for classroom use, for the expansion of his or her own knowledge, and for students. **Component 1e Designing Coherent Instruction:** teachers coordinate knowledge of content, of students, and of resources, to design a series of learning experiences aligned to instructional outcomes and suitable to groups of students. **Domain 2 Classroom Environment: Component 2e Organizing Physical Space:** The classroom is safe, and learning is accessible to all students, including those with special needs. Teacher makes effective use of physical resources, including computer technology. The teacher ensures that the physical arrangement is appropriate to the learning activities**. Domain 3 Instruction: Component 3c Engaging Students in Learning:** Virtually all students are intellectually engaged in challenging content through well-designed learning tasks and suitable scaffolding by the teacher and fully aligned with the instructional outcomes. **Domain 4 Professional Responsibilities: Component 4e Growing and Developing Professionally:** Teacher seeks out opportunities for professional development to enhance content knowledge and pedagogical skill. Evaluation is a continuous, collaborative process designed to improve instruction and the performance of students. It is intended to be positive and growth oriented. It is based on fundamental principles of effective evaluation and contemporary research in assessment practices.

The benefits of the training are to increase the opportunity for teachers develop the knowledge and skills they need to address students’ learning challenges and improve their instruction. The use of technology to increase student engagement. Teachers are provided knowledge of how to embed technology into the learning environment. Based on the article The Benefit of Integrating Technology, “A number of studies have been conducted which show using technology in the classroom to be beneficial to academic achievement” (Ranasinghe and Leisher 2009).

The skill gap is addressed during the training session. The resource being used prior to training will be two different surveys. The surveys will be created using Survey Monkey and sent out to participants prior to training utilizing their county email. Survey number one will be a pre-training survey to determine which stage the participants are at when it comes to the use of technology (see Appendix A). The second survey sent out will be to determine what level of knowledge participants have with basic computer operations and concepts,programs, software, terminology, and their Internet abilities (see Appendix B).

At the end training participants will be competent in outcomes reflecting several different types of learning and, where appropriate, representing opportunities for both coordination and integration of technology. Presenting the coordination of in-depth content knowledge, understanding of different students’ needs, and available resources of technology, resulting in a series of learning activities designed to engage students. Makes effective use of physical resources, including technology. Ensures that the physical arrangement is appropriate to the learning activities. Students being intellectually engaged in challenging content through well-designed learning tasks and suitable scaffolding by the teacher and fully aligned with the instructional outcomes. Initiating important activities to contribute to the profession. The measurement used to determine the goal achievement is trainer observation and the completion of final project. Participants will be required to complete a predetermined Power Point video embedding music using step-by-step instructions provided by the trainer.

**Description of the target group**

The target group participating in the staff development will be primarily Pre-K ESE teachers. ESE teachers are those who work with Exceptional Students with various disabilities. The last few years have shown an increase with early childhood education becoming more prevalent within the school districts, for example 2017-2018 school year Volusia County had only 45 Pre-k teachers educating approximately 400 students. As of 2019-2020 school year, Volusia County has 72 Pre-K ESE teachers educating approximately 610 Pre-K students. The training will be capped at 15 people per training session due to the possible technical support that may be required.

**Expected Learner Outcomes**

The purpose is to enable PreK teachers to obtain or improve professional knowledge and competencies regarding technology use in order to make curriculum modifications that support individual student engagement. For this staff training, Power Point will be used to demonstrate integration of embedded music into a video to facilitate student engagement.

Upon successful completion, participants will (1) demonstrate curriculum modifications and adaptations with the use of technology therefore improving student engagement and achievement; (2) identify and use appropriate technology strategies, adaptations or modifications to promote the development of pre-k children in the areas of social emotional skills, cognitive skills, pre-academics, early literacy, motor development, activities and communication; (3) identify appropriate educational techniques, technology resources, materials and activities for use by instructional personnel to service the identified needs of Pre-k ESE students; (4) increase their use of a variety of technologies to create adapt/modify classroom curriculum and increase student engagement.

The maximum class size will be limited to eight people to ensure effective delivery of a training and participant support. This will allow the trainer the ability to give feedback to each participant individually and allows for the interactive exercise to be facilitated. Due to the limited number of participants the training will be offered multiple times through the school year. Each training session will be 4 hours providing the opportunity to offer two sessions each day; AM session and a PM session to accommodate the participants availability.

The required knowledge and skill prerequisites for training are

* Basic computer operations and concepts
  + Understand the basic function of computer hardware components monitor, keyboard, and file storage
  + Find and start a program
  + The ability to navigate between programs
  + Save files to the hard drive or removable storage, such as a CD or flash drive
  + Create a file folder for a specific project on a computer
  + Know how to add files to a specific folder on a computer
  + Exit or quit an application
  + Log off a computer
  + Shut down a computer properly
* Familiar with the following programs or software
  + Power Point
  + Microsoft Word
  + Windows Media Player
  + Audacity
* Familiar with the following terms
  + File explorer
  + Clipboard
  + Ripping
  + WAV (Waveform Audio File Format)
  + MP3 or MP4 (MPEG-3 or MPEG-4)
  + WMA (Windows Media Auto File)
  + OGG (Open Container format)
* Copyright infringement
* The ability to use the Internet
* Locate a website given the address
* Use the browser's capabilities to go back, forward, reload/refresh, and print
* Save a website address in the bookmarks or favorites
* Find information using a search engine such as Google or Yahoo
* Download and save files, such as graphics, documents, or PDFs, from the Internet
* Familiar with the “Fair Use” act

**Professional Development**

Based on a survey conducted by Denise, Pre-k Support Specialist, a technology team was created to deliver a variety of workshops based around the use of technology in the classroom. The survey was sent out to 72 Pre-K teachers with 65 teachers responded. The survey results yielded teachers were most interested in learning how to use QR codes, SeeSaw, Interactive whiteboards, Assistive technology along with a Power Point presentation and embedding audio into Power Point. The type of adult learning being proposed is to train teachers how to embed audio into a Power Point presentation to increase student engagement and participation. The training will take place in a face-to-face format with a 1:8 ratio. According to Reiser in Trends and Issues in Instructional Design and Technology (2011), the instructional design of a learning opportunity should be:

1. Student-centered

2. Goal-oriented

3. Focused on meaningful performance

4. Have measurable outcomes

The training will incorporate a variety of instructional strategies consistent with adult learning principles. The training will be developed around active learning (student-centered) where the participants are asked to engage in the learning process. The goal of the training is to be appropriate for their classroom and for immediate implementation (goal-oriented). Goal-oriented training is important to adults as all training should be relevant to their jobs (focused on meaningful performance). A variety of methods will be used during training, such as direct instruction introducing terms needed to be successful, discussions, hands-on activity, modeling, and practice. The measurable outcome will be the completion of a Power Point video with music embedded.

The following ISTE Standards for Technology Coaches (ISTE, 2016) will be addressed in the training:

#1 Change Agent - Coaches inspire educators and leaders to use technology to create equitable and ongoing access to high-quality leaning.

* + Connect leaders, educators, instructional support, technical support, domain experts and solution providers to maximize the potential of technology for learning.

# 4 Learner Designer - Coaches model and support educators to design learning experiences and environments to meet the needs and interests of all students.

* Collaborate with educators to design accessible and active digital learning environments that accommodate learner variability.

# 5 Professional Learning Facilitator - Coaches plan, provide and evaluate the impact of professional learning for educators and leaders to use technology to advance teaching and learning.

* Design professional learning based on needs assessments and frameworks for working with adults to support their cultural, social-emotional and learning needs.

**Technology-enhanced learning experiences**

Media or technology tools employed for teaching, learning and assessment of the adult learners.

**Support Materials Used**

|  |  |
| --- | --- |
| Computer (county issued) | LCD Projector (provided by trainer) |
| Headphones (provided by trainer) | Images for project (provided by trainer) |
| Power Point handout (provided by trainer) | USB drive (provided by trainer) |
| Greg & Steve We All Live Together, Vol. 2 Music CD (county issued) | How to guide created using Microsoft Publisher (provided by trainer) |
| Writing tool and scrap paper (provided by trainer) | Earbuds (new – provided by trainer) |

Media or technology tools will need to be managed, supported, or acquired for this project.

**Required Hardware/Software**

|  |  |
| --- | --- |
| Laptop | LCD Projector |
| Windows 8 or higher | Microsoft Power Point |
| Windows Media Player | Presentation clicker |

How will you ensure equitable and appropriate use of the technologies?

**Project Planning**

In planning for the training, the department will need to think about alternative ways to deliver the information if the intended training environment becomes unusable. Alternatives would include using a different training environment as the county has several different facilities to offer as a training environment. If none of those environments are available during the time of a training session, training may take place virtually using Adobe Connect, Zoom, Skype, Join.me depending on what most of the participants are most familiar with. Provide each teacher with the training materials along with a “How To” guide and the teachers would complete the training session independently with the support of the training facilitator through either email, virtual communication, or in person.

The restrictions or limitations for delivering the training would include the completing the development of the training due to the availability or the time trainer must invest in developing the materials. The engagement of the trainer and participants in the training. The availability of materials, training aides, time and availability of participants.

**Estimated budgeting**

The budget for the training would be as follows:

* $800.00 per session to provide a sub for teachers to participate in the training.
* $96.00 per session to provide each teacher with the CD Greg and Steve We All Live Together Volume 2 (1 CD provided per participant)
* $42.67 per session for USB drives for each teacher (new USB drive provided per session)
* $41.58 per session for earbuds for each teacher (new earbuds provided per session)

**Appendix A  
Data Set 1: Pre-training Survey**

School: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Please assign yourself a profile based upon four phases of DOE teacher technology adoption. This list underscores the idea that understanding and using technology well takes time. It also outlines very distinct stages that suggest the need for tailored activities for future professional development. Select only one!**

Early - I am beginning to feel comfortable using technology. I use it mainly as a productivity tool (email, Internet browsing, word processing). My students are learning with and using technology; however, someone else usually determines their use.

Developing - I've successfully use technology for increase productivity (designing newsletters, keeping grades), and to enrich curriculum, (research, lesson planning). Under my guidance and with some assistance of others, my students use technology to work on projects.

Proficient - I confidently use technology as a tool for research, lesson planning, multimedia presentations and /or simulations. Technology is integrated into my lessons, and I facilitate my students in the use of scanners, digital cameras, and mobile wireless technology where applicable.

Advanced - I'm prepared to develop new learning environments that utilize technology as a flexible tool. Learning has become more collaborative, interactive and customized which involves students in tasks that require higher-order thinking skills and extend learning beyond the classroom walls.

1. **Teacher Administrative Use: Estimate your use of administrative technology, including some of the following areas: research, lesson planning, organization, administrative tasks, communications, and collaboration.**

I use technology for administrative/productivity nearly every day

I use technology for administrative/productivity about once a week

I use technology for administrative/productivity about once every two weeks

I use technology for administrative/productivity about once a month

I rarely or never use technology for administrative/productivity

1. **Teacher Instructional Use: Estimate your use of instructional technology with students for activities such as research, multimedia, simulations, data interpretation, communications, and collaboration:**

I use technology for instruction nearly every day

I use technology for instruction about once a week

I use technology for instruction about once every two weeks

I use technology for instruction about once a month

I rarely or never use technology for instruction Bottom of Form

**Appendix B**

**Data Set 2: Technology Skills**

**Please indicate if you can complete the following tasks for each of the identified areas of technology skills.**

|  |  |  |
| --- | --- | --- |
| 1. Basic Computer Operations and Concepts: | Yes | No |
| Do you understand the basic function of computer hardware components such as the CPU, monitor, keyboard, and file storage? |  |  |
| Can you find and start a program? |  |  |
| Can you navigate between programs? |  |  |
| Can you save files to the hard drive or removable storage, such as a CD or flash drive? |  |  |
| Can you create a file folder for a specific project on a computer? |  |  |
| Do you know how to add files to a specific folder on a computer? |  |  |
| Can you log off a computer? |  |  |
| Can you shut down a computer properly? |  |  |
| Can you exit or quit an application? |  |  |

1. **How familiar are you with the following programs or software?**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Not at all | Slightly | Somewhat | Moderately | Extremely |
|  | 1 | 2 | 3 | 4 | 5 |
| Power Point |  |  |  |  |  |
| Microsoft Word |  |  |  |  |  |
| Windows Media Player |  |  |  |  |  |
| Audacity |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 1. Are you familiar with the following terms? |  | Yes | No |
| File explorer (aka Windows Explorer) |  |  |  |
| Clipboard (not the kind you use to clip paper to and write on) |  |  |  |
| Ripping |  |  |  |
| WAV (Waveform Audio File Format) |  |  |  |
| MP3 or MP4 (MPEG-3 or MPEG-4) |  |  |  |
| WMA (Windows Media Auto File) |  |  |  |
| OGG (Open Container format) |  |  |  |
| Copyright infringement |  |  |  |

|  |  |  |
| --- | --- | --- |
| 1. Internet: | Yes | No |
| Can you locate a website given the address? |  |  |
| Can you use a browser's capabilities to go back, forward, reload/refresh, print and stop? |  |  |
| Can you use a web browser to follow links to another website? |  |  |
| Can you save a website address in the bookmarks or favorites? |  |  |
| Can you find information using a search engine such as Google or Yahoo? |  |  |
| Can you download and save files, such as graphics, documents, or PDFs, from the Internet? |  |  |
| Are you familiar with the “Fair Use” act? |  |  |

**Appendix D**

#### 107. Limitations on exclusive rights: Fair use40

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(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;

(2) the nature of the copyrighted work;

(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and

(4) the effect of the use upon the potential market for or value of the copyrighted work.

The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.

**References**

Copyright.gov <https://www.copyright.gov/title17/92chap1.html#107>

Germain-Rutherford, A. & Ernst, P. 2015. "European language teachers and ICT: Experiences, expectations, and training needs". In Hampel, R., & Stickler, U. eds. Developing online language teaching: Research-based pedagogies and reflective practices. Hampshire, England: Palgrave Macmillan, pp. 12-27.

Hampel, R., & Stickler, U. 2015. Developing online language teaching: Research-based pedagogies and reflective practices. Hampshire, England: Palgrave Macmillan

ISTE Standards for Coaches. (n.d.). Retrieved November 15, 2020, from https://www.iste.org/standards/for-coaches

Ranasinghe, A.I., Leisher, D. (2009). The Benefit of Integrating Technology into the Classroom*.* - International Mathematical Forum, No. 40. Retrieved from <http://www.m-hikari.com/imf-password2009/37-40-2009/ranasingheIMF37-40-2009.pdf>

Reiser, R.A. & Dempsey, J. V. (2011). Trends And Issues In Instructional Design And Technology. 3rd Ed. Pearson Education, Allyn & Bacon. Boston, MA.

Volusia County Schools (2016) Instructional Evaluation System <https://ufdc.ufl.edu/IR00010257/00001>