INSTRUCTIONAL DESIGN PROPOSAL

Class

Problems in Instructional Design for Computers EDF 6284 Dr. Glenn Smith

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ABSTRACT

Hillsborough County Public Schools will reopen for the Fall 2020 semester during the COVID-19 pandemic; the school environment and the instruction will need to adapt to these unprecedented times. This Computer-Based Instruction (CBI) was been developed to assist instructors in transitioning from face-to-face learning to online/distance learning. After engaging with this elearning course, teachers will be able to create an online classroom in Canvas (an LMS system), utilize video conferencing tools, and manage their students effectively in this online environment. Most importantly, teachers will be able to confidently navigate this online frontier with new skill sets that their students can benefit from and possibly inherit themselves.

NEED FOR PROJECT

Teachers are on the front lines when it comes to tackling online learning for their students. The recent COVID-19 pandemic has forced many teachers from various backgrounds and teaching environs with students of differing needs into the unfamiliar world of distance learning. It could be argued, based on pessimistic media portrayals, that most teachers find the task daunting, if not completely impossible.

Online education and face-to-face learning are assumed, by the uninformed, to be similar. Many think that it is as easy as slapping a lesson plan on a computer, recording a lecture, and assigning the homework assignments. This myth has harmed, perhaps irreparably in some cases, the reputation of distance learning as a possible avenue of future education. With the countrywide lockdown, teachers, even many with little to no computer experience, were forced to make do with what they had. This led to confusion, frustration, and in many cases terrible failure. Online education is fundamentally different from education in a brick and mortar classroom. The major contrasts lie in classroom set up and student expectations: Will the class be synchronous or asynchronous? Can students be expected to self-motivate? How will socialization be maintained between teacher-student and student-student? And this doesn't even begin to cover problems teachers may encounter involving funding or students coming from poor households that lack internet access.

This is all a lot to put on the plate of the uninitiated. HCPS Teachers need training that could help them in transitioning. This training would be crucial in preventing common pitfalls, providing helpful aids and guides, and troubleshooting issues that may arise in the virtual classroom.

In the midst of a transition to distance learning, HCPS has been overwhelmed with calls, emails, and even social media messages from teachers uncertain about the many variations of learning, and how to handle them.

The overarching goal is to ensure HCPS teachers are trained to provide high-quality face-to-face and online education, and to ensure students have the least disruption to their education (Florida

Department of Education, 2020). To uphold these goals and quality standards, we must conduct a uniform training for all teachers of HCPS to ensure that every teacher has the same knowledge and skills.

TARGET AUDIENCE

The target audience of this CBI will be teachers from the Hillsborough County Public School System. These teachers may have a varied level of experience with instructional technology and online teaching, with the possibility of some having little to no knowledge at all. With the average age of a Florida public school teacher being 43.7 (IES National Center for Education Statistics, 2003-04), it is likely that many may lack higher level technology skills.

However, despite this possible shortfall in tech expertise, teachers often demonstrate advanced levels of aptitude, reading, and visual literacy. In order to teach in the state of Florida, teachers are required to hold educator certification, which includes meeting prerequisites such as passing basic knowledge examinations and completing a formal teacher preparation program (Teacher Certification Degrees, 2020). This indicates that the average teacher is more educated and well suited or at least well adapted to the average learning environment.

Teachers generally enjoy learning and are known to be continual learners; however, this transition may be very difficult for many. Some teachers may not be motivated to teach via online instruction after years of face-to-face and brick and mortar education. In fact, some teachers may even experience anxiety or feel overwhelmed (Schaffhauser, 2020).

The percentage distribution of teachers by gender is 79% female and White was the largest racial/ethnic category in Hillsborough County Public Schools at 71.34% (Florida Department of Education, 2020). We should keep in mind that women tend to respond better to informal conversational instruction and, despite the racial majority, be mindful of possible cultural and racial miscommunication.

It would also be prudent to consider the socioeconomic status of our teachers when mandating a required online program. Glassdoor lists the typical Hillsborough County Public Schools teacher salary as \$44,126; but teacher salaries at Hillsborough County Public Schools can range from \$37,315 - \$62,197, which in some cases puts a teacher only slightly above the poverty line (Glassdoor Inc., 2020). With public computer access being limited due to COVID-19, additional access should be provided for all teachers entering online education this fall.



38 yrs Married Male Teacher for 10+ yrs

Education Approach:

Traditional
Brick and Mortar
Lecture-style
Older Students (Middle-High)

Technology Exp:

Moderate
Word Doc & Excel
Internet Savvy
Plays Computer Games
No LMS Experience
No E-Learning Experience

Health:

Average Health Small Hearing Loss Needs Captions on Videos



Kimi

25 yrs Single Female Teacher for 1-5 yrs

Education Approach:

Inexperienced & Open-minded
Brick and Mortar
Student-centered
Young & Older Students
(Elementary-High)

Technology Exp:

Moderate-High
Internet & Social Media Savvy
Some LMS Experience as a
College Student
No E-Learning Experience

Health:

Good Health Wears Glasses



Joanna

67 yrs Married Female Teacher for 40+ yrs

Education Approach:

Traditional & Experienced
Brick and Mortar
Settled In Her Ways
Young Students (Elementary)

Technology Exp:

None-Low
Family Assistance w/Electronics
No Home Computer
No LMS Experience
No E-Learning Experience

Health:

Senior Poor Eyesight Can't read small text

(Hsu, 2017)

BEHAVIORAL OBJECTIVES

After taking the computer-based training that we are proposing, the overarching goal is that teachers will be prepared to use Canvas and Zoom, the instructional technologies selected by Hillsborough County Public Schools, so that they will be able to set up their online classes and begin teaching their online learners at the beginning of the school year.

By the end of the training, trainees (HCPS teachers) will be able to:

Prepare online (e-learning) instruction

- Design online lesson plans by repurposing classroom lesson plans for online learning
 - o Examine previous lesson plans
 - o Repurpose/align with face-to-face lesson plans

- (Look out for areas in the lesson that cannot be achieved in a virtual classroom setting)
- Set aside lessons that may be recreated into virtual lessons for a future date
- o Check that proper assessment tools, assets and any other extras required with the lesson are possible in Canvas.
- Create online student rules and expectations policy
 - o Explain how to participate and be respectful using Zoom in the online class
 - Explain that mute is used to avoid distracting others and unmute when speaking
 - Explain that the camera can be used for attendance and class participation
 - Explain that the hand icon can be used for students to ask a question
 - Explain that students can send messages if they are having an issue or question
 - Explain that a thumbs-up shows participation, when asked a group question
 - o Explain how to ask a question in Canvas
 - Go to the inbox and send a message to the teacher
 - Email the instructor
 - o Explain how to submit assignments
 - Explain that assignments must be submitted using the lesson assignment module
 - Explain that the student's name must be on the assignment
- Create a student class schedule
 - o Describe that the class schedule is the same as the regular brick and mortar school schedule

Demonstrate knowledge of instructional technology

- Identify that Clever is the District portal for accessing Canvas
 - o Recall that all students are set up in Clever
 - o Identify that District IT connects all student Canvas accounts to their student Clever accounts
 - o Explain that students and teachers must log in to Clever to open the Canvas
 - o Identify the Canvas app
 - Explain that Clever and Canvas have the same username and password
 - Recall the Clever username = student number (lunch number)
 - Recall the password = student's usual Windows/District/Clever password
- Identify the basic features in Canvas, a learning management system
 - o Identify the dashboard
 - o Identify the courses
 - o Identify the calendar

- o Identify the inbox
- o Identify the To Do panel
- o Identify the course module and layout (lesson, assignment, quiz, discussion board)
- Identify that Zoom can be added to Canvas course
 - o Identify how to add Zoom to the course
- Identify the basic features in Zoom, a cloud-based video communications app
 - o Locate the screen share feature
 - o Locate the speaker icon
 - o Locate the camera icon
 - o Locate the hand icon
 - o Locate the message icon

Set up online (e-learning) instruction

- Log in to Clever and open the Canvas app
 - o Go the Clever website
 - o Enter District username and password
 - o Locate the Canvas app
 - o Open the Canvas app (using the Clever name and password)
- Set up one course in Canvas so that it appears in Dashboard and Courses (for example, Math)
 - o Set up one course learning module and enter module lesson
 - Enter text, image, and video
 - o Set up sample assignment
 - o Set up sample quiz
 - o Send a sample course announcement
- Set up a Zoom meeting for sample course (in Canvas)
 - o Set up course Zoom ID number and password
- Post online course student expectations, bell schedule and basic computer procedures
 - o Post online student expectations in Canvas
 - o Post student class (bell) schedule in Canvas
 - o Post basic computer procedures to support online learning communication
 - Sending a message (using inbox)
 - Saving a document
 - Submitting assignments

CBI CONTENT

The overarching goal of this CBI is to ensure HCPS teachers are trained to provide high-quality face-to-face and online education, and to ensure students have the least disruption to their education. (Florida Department of Education, 2020)

The content breaks down into two main sections:

Teaching HCPS teachers how to prepare for online (e-learning) instruction.

- Teachers will learn how to design online lesson plans by repurposing classroom lesson plans for online learning.
- They will be taught how to identify the proper assessment tools and assets that are suitable for an online learning environment, and that work in Canvas.
- They will learn what sort of documents are needed for students working on an online platform, such as an online student rules and expectations policy, and a student class schedule.

Training HCPS teachers on the instructional technology used by the District in online learning.

- Teachers will be taught that Clever is the District portal for accessing Canvas and will learn how their students are set up in Clever.
- They will be introduced to and learn the basic functions of Canvas, the online learning management system used by HCPS.
- They will learn the basic functions of Zoom, the cloud-based video communications app used by the District to provide online synchronous learning.

The CBI design team have knowledge of Canvas, Zoom, and Clever, and one of the team has taught for HCPS. The team has access to a student currently attending classes with HCPS and can bring a current HCPS teacher on board, if necessary, as a content expert. However, it is more likely that the in-team knowledge will be sufficient for this CBI.

TIME SCALE FOR CBI

We anticipate this CBI will be an on-demand, asynchronous, self-paced learning activity. We recommend learners, over a period of three weeks, log in to Canvas and work on the CBI content for 30 minutes daily. It is recommended that they set a goal of completing one module each week.

INSTRUCTIONAL ACTIVITIES AND STRATEGIES & MATERIALS

Training Format

The training will be presented to the trainees as a self-paced computer-based training.

Instructional strategy

The training will be designed so that the trainees can see the value of the material and internalize the instruction. We understand that adult learners are motivated when training demonstrates job relevancy. Because teachers need to learn how to teach students online, especially learning the instructional software, the training will be designed to have practical application to the job

requirements so the trainees will be able to apply their knowledge and skills immediately after the training.

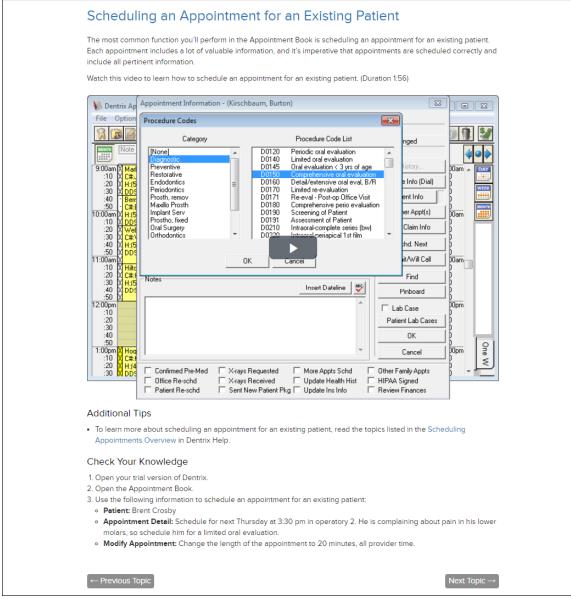
To improve the learner's understanding, we will use a combination of development and identifiable prerequisite learning-related sequencing. To implement these instructional strategies, we will ensure that the learner has reached the appropriated developmental level before teaching a new task or topic. To demonstrate this, we will sequence the content by first teaching the learner how to prepare online instruction as an identifiable prerequisite before teaching the learners how to use the instructional technology. After that we will then teach the learner how to use the instructional technologies before the teaching them how to set-up an online class to demonstrate development learning.

For this training, trainees will log into Canvas to acquire knowledge in each lesson and, at the end of each lesson, trainees will complete the "Check Your Knowledge" exercises. The "Check Your Knowledge" exercises include tasks where trainees must open their own Canvas account to get the hands-on practice and skills using each software based on the lesson presented.

To illustrate the course objectives and help trainees to mentally organize the components of the instruction and know how they are going to apply their knowledge, each lesson will include:

- Clearly state the objectives
- Use a dropdown menu to show each task and related subtasks
- Use a progress bar to inform trainees where they are at in the training
- Use actual images of the instructional software
- Use clear and concise text with plain language
- Use video
- Show examples

Here is an example of how each lesson will appear:



(Henry Schein One, 2020)

Using the instructional strategies will achieve the overarching goal of preparing teachers to successfully set up their online courses and be ready to teach students online for the new school year.

SETTINGS & MATERIALS

In an effort to reduce COVID-19 risk by limiting teachers' in-person time in the school building, this CBI will be online and asynchronous. As such, it can be used anywhere the learner has access to a computer or mobile device. This can be at home, or at school if that is the preferred option for computer access for a particular learner.

A limitation of the purely online setting will be lack of face-to-face, interactive discussion. This may be addressed in part by the Zoom component of the CBI that will provide opportunity to practice skills in a video call with other learners in a group.

The CBI training will include a training manual that can be accessed electronically and downloaded so the manual can be printed.

Learners will be added to the Canvas course through their existing HCPS login. They will receive an email with directions for accessing the course through the Clever portal, using a computer and/or a mobile device.

ASSESSMENT

The assessments are relevant to how trainees will show skills, attitudes, or knowledge as stated in the objectives. To review the assessments, see the Appendix:

- Appendix A: Written assessment questions
- Appendix B: Written assessment
- Appendix C: Performance assessment

By the end of the training, trainees will have the knowledge and understanding to identify and perform the skills needed when faced with preparing online instruction, demonstrate knowledge and skills with instructional technology, and set up an online class. The trainees will have the following subordinate skills after the training:

Prepare online (e-learning) instruction

- Design online lesson plans by repurposing classroom lesson plans for online learning
- Create online student rules and expectations policy
- Create a student class schedule

Demonstrate knowledge and skills with instructional technology

- Identify that Clever is the District portal for accessing Canvas
- Identify the basic features in Canvas, a learning management system
- Identify that Zoom can be added to the Canvas course
- Identify the basic features in Zoom, a cloud-based video communications app

Set up an online (e-learning) class

- Log in to Clever and open the Canvas app
- Set up one course in Canvas so that it appears in Dashboard and Courses (for example, Math)
- Set up a Zoom meeting for sample courses (in Canvas)

• Post student expectations, class (bell) schedule, and basic computer procedures to support online learning communication in Canvas

GROUP MEMBERS' RESPONSIBILITIES & IMPLEMENTATION

Tentative Task Assignments

Betty will design and develop the video content. She will set up the course platform and design lesson modules.

Shannon will design and develop the course assessments. She will provide assistance to course development when necessary. She will assist Betty on images and graphics where needed.

Annette will assist in developing the course platform setup and will overview course logistics and function. She will assist Betty on images and graphics where needed.

Individual activities in each course module will be assigned to each of the group members for testing, proofreading, and editing.

Project Course Development

Team BAS is choosing to develop a course that will include the tasks and subtasks for the second behavioral objective where trainees must demonstrate knowledge and skills with instructional technology,

- Identify that Clever is the District portal for accessing Canvas
- Identify the basic features in Canvas, a learning management system
- Identify that Zoom can be added to the Canvas course
- Identify the basic features in Zoom, a cloud-based video communications app

Computer-Based Applications to be Used

- Camtasia will be used to develop video content.
- Audacity will be used to develop audio content.
- Snagit and Photoshop will be used to capture images and graphics.
- Captivate is under consideration as the authoring tool that will be used for creating eLearning content.
- Canvas tentatively will be used as the course learning management system/authoring system.

Method of Implementation

The computer-based instruction (CBI) will be implemented using the Canvas LMS (learning management system). The course will include embedded video content, instructional text, knowledge checks, and quizzes. Zoom will also be accessed from within the Canvas LMS for cloud-based video communications. The LMS and Zoom can both be accessed via PC and/or mobile devices.

Tentative Implementation Issues

Software cost is a potential issue when choosing a multimedia authoring tool. Adobe Captivate is a good choice but necessitates purchase, or a free trial. If a free trial is used, there may be issues with limited access to components of the CBI after the trial expires. Camtasia will likely be used as one of the group members has existing access to this tool.

The version of Canvas that is free for teachers does not include access to the SCORM plugin that enables embedding of certain training content (for example, Articulate Storyline). The group will be testing our authoring software to make sure this issue does not prevent successful course implementation.

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APPENDIX A

Written Assessment Questions

Demonstrate knowledge and skills with instructional technology

Trainee must receive at least a 75% or better to pass the assessment

Multiple Choice

- 1. Online classes use the following Zoom techniques to demonstrate student participation:
 - a. Cameras on so that student can be seen
 - b. Thumbs-up when asked a question by the teacher
 - c. Asking a question using the message feature
 - d. All of the above
- 2. When using Zoom, students can be respectful of their peers by:
 - a. Muting the sound
 - b. Keeping the sound on
 - c. Both a and b
- 3. If the student needs to ask a question on Canvas, they can:
 - a. Go to the inbox and send a message to the teacher
 - b. Call the instructor

- c. Text the instructor
- d. Email the instructor
- e. a and d
- 4. To submit an assignment, the student must make sure:
 - a. The student's name is present
 - b. It is submitted in the lesson assignment location
 - c. It is submitted in the inbox
 - d. Both a and b
- 5. The online school schedule is same as the brick and mortar school schedule.
 - a. True
 - b. False
- 6. The Canvas app is located on the Clever website.
 - a. True
 - b. False
- 7. Students and teachers use the same username and password that they already have in Clever to access Canvas.
 - a. True
 - b. False
- 8. HCPS District IT connects all student Canvas accounts to student Clever accounts, so the teacher will not have to do this.
 - a. True
 - b. False
- 9. The student's lunch number is their username for Canvas.
 - a. True
 - b. False
- 10. The student's Clever password is the same password used for Canvas.
 - a. True
 - b. False

APPENDIX B

Written Assessment

Repurposes classroom lesson plans for online (e-learning) environment

EVALUATION RUBRIC	DEVELOPING	PROFICIENT	ADVANCED
Rapport w/ Students (allows time for Student to Student and Student to Teacher discussions)	Lesson shows signs of having considered brief breaks for discussion but little else.	Lesson gives students opportunity to work with their peers either synchronously or asynchronously.	Lesson shows considerable attention and ability to give students opportunities to work together synchronously or asynchronously.

Appropriate and Adapted Use of Required E-learning Tools	Lesson has not fully adapted to the online platform.	Lesson has made appropriate steps to utilize new e-learning tools.	Lesson has utilized new e-learning tools in a way that enhances the original lesson in new and exciting ways.
Pacing and Timing (lesson can still be completed in a timely manner)	Lesson does not give much consideration to timing.	Lesson is mindful of overall time required for the lesson.	Lesson keeps track of the timing of each activity and assists in helping teacher with appropriate fillers or cuts in activities where necessary.
Synchronous Live Session (lesson can be transitioned into short lecture)	Lesson lecture is awkward and/or clunky when transitioned over. Lesson is too teacher- focused. Potential to lose student interest.	Consideration has been given to student-centered teaching. Lecture is adapted appropriately.	Lesson is enhanced by engaging live sessions to serve not only to teach but to motivate students when starting lesson activities.
Discovery Activity (Students have opportunity to play with what they've learned)	Discovery activity is absent or not adapted to online play.	Discovery activity has been appropriately adapted to the online learning platform.	Discovery activity is enhanced by e-learning tools. It provides engaging and motivating play.
Production Activity (Students have opportunity to show what they've learned)	Production activity is absent, not adapted, or simply uninspiring (e.g. presenting to a camera every lesson)	Production activity has been appropriately adapted and provides variety from average production activities.	Production activity is enhanced by e-learning tools. It provides students the ability to showcase their skills in new and exciting ways.
Assessment (Student progress can be assessed in lesson)	Online assessment is absent or not properly adapted.	Online assessment is appropriately adapted.	Online assessment is appropriately adapted and enhanced creatively by online tools. (Subjective to opinion.)

APPENDIX C

Performance Assessment

Sets up online (e-learning) instruction

Each task is worth 1 point. Trainee must receive at least a 75% or better to pass the assessment.

PERFORMANCE SKILL TESTED	COMPLETE	INCOMPLETE
Logs in to Clever and opens		
the Canvas app		
Goes to the Clever website		
Enters District username and		
password		
Locates the Canvas app		
Opens the Canvas app (using		
the Clever username and		
password)		
Sets up one course in Canvas		
so that it appears in		
Dashboard and Courses (for		
example, Math)		
Sets up one course learning		
module and enters module		
lesson		
Sets up sample assignment		
Sets up sample quiz		
Sends a sample course		
announcement		
Sets up a Zoom meeting for		
sample course (in Canvas)		
Sets up course Zoom ID		
number and password		
Posts online course student		
expectations, bell schedule		
and basic computer		
procedures		
Posts online student		
expectations in Canvas		
Posts student class (bell)		
schedule in Canvas		
Posts basic computer		
procedures to support online		
learning communication		