Educators 4 Educator Success

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I. Background and Statement of the Problem

As teachers and staff return to Missouri Military Academy and Independent Schools of St. Louis (ISSL) every year, this group of researchers noticed the insufficiency level in the onboarding processes, specifically technology training. This insufficiency has led to early teacher burnout and anxiety surrounding the perceived lack of time to prepare for implementation of curriculum. The long-term goals of this project are to move this training to an online module to streamline information from Human Resources, Information Technology, and administration. The focus of this semester project will be primarily on training modules dedicated to learning and implementing Jamboard in various areas in the classroom. This streamlining will hopefully eliminate unnecessary stress factors that highly impact our educators.

II. Needs Analysis

A. Overview

During needs analysis, the project team members sought to collect data on what Google programs teachers were using in their classrooms and in their work. A related goal was to also learn how comfortable and proficient these teachers felt using each of these programs, as well as their preferences for online vs. in-person learning. Needs analysis highlighted that most teachers were comfortable with Google Classroom and many of the programs included in Google Suite. Jamboard emerged as the program teachers were the most unfamiliar with and needed the most

training on. The short-term goals of this project include familiarizing teachers with Jamboard and having them propose ways they could use Jamboard in their work. The long-term goals of this project include teachers being able to effectively use Jamboard and incorporate its use in their work, with the added effect of reducing unnecessary labor and preventing teacher burnout and anxiety. Technology training is a part of beginning of the year teacher professional development days so these would be normative needs.

B. Data Methods and Analysis

Educators 4 Educator Success has collected data in the following ways:

Round 1: An online, anonymous survey was created using Qualtrics that included 14 questions about the teachers' use of Google Classroom and Google Suite programs, their confidence and proficiency in using the programs, demographic information, and their feelings on training for these programs. The survey was sent through an emailed link to teachers at Missouri Military Academy and Independent Schools of St. Louis (ISSL). The method for selecting the samples was to include teachers who were likely to respond. The survey collected 18 different responses. The limitations of the sample are that about 61% of respondents had been teaching for 5 or more years, with only one respondent teaching 1–3 and no first-year teachers. This does not make for a very representative example.

Round 2: Interviews were conducted using an online fillable form format. When reviewing the data from round one, it was noted that participants would want to conduct training virtually on their own time. Therefore, the project team decided to send the interview questions via a Google Form. The Google Form collects emails so follow-up in-person interview questions for specific individuals can be conducted if needed. The online interview process collected results from 9 respondents. The sample was selected by sending out the form to teachers who

project team members knew, through in-person interaction, had already completed the survey. The limitations of this sample are that they were largely collected from only one of the target schools, and only one respondent taught at the elementary level while the remaining 8 taught at the middle and high school levels.

Round 3: Observations were conducted at the two target schools. The observations were used to inform both the gap and context analysis. For the gap analysis, project team members noted whether or not they saw Jamboard being used amongst their colleagues. The observations conducted by the project team members also informed context analysis and included surveying spaces for training, teachers' classrooms, availability of technological resources, reviewing lesson plans, and noting the school culture in relation to training format, technology, and learning new skills.

Round 4. Literature was reviewed online through Google's resources about their programs to inform task analysis. The team members also reviewed online videos from educators who have used Jamboard effectively in their work to collect data for task analysis and learning experiences. Team members also did virtual "walkthroughs" of the Jamboard program to inform the design of this project.

Data Source	**Analysis Informed**	**Sample/Data Size | Sampling Method**
Online Survey (Qualtrics	Gap	18 Survey responses; respondents selected from group members schools

Online Survey (Qualtrics)	Learner	18 Survey responses; respondents selected from group members schools
Online Interview (Google Forms)	Gap	9 Interview responses; respondents selected from group members schools
Online Interview (Google Forms)	Learner	9 Interview responses; respondents selected from group members schools
Observation	Context	Team members at the two target schools conducted observations
Literature Review (Google, online videos)	Task	Review of best practices Jamboard
Observation	Gap	Team members from E4ES share their observations
Observation (virtual walkthrough of Jamboard)	Task	Team members from E4ES conducted the virtual walk through

C. Gap Analysis

The methods used to inform gap analysis of this project include an online survey, online interviews, and observations from project team members. The desired state is for teachers to be able to effectively use Jamboard and incorporate its use in their work. The current state is that teachers are not familiar with Jamboard and don't use it. The project team sought to determine

why, given access to the program Jamboard, the teachers aren't using it. A lack of knowledge about what Jamboard is, and how it can be used for the teachers' specific content areas, emerged as the root cause from the team's analysis.

Current State	**Desired State**	**Root Cause**	**Evidence of Root Cause**	**Strategies to Address**
Teachers are unaware of the functionality of Jamboard and its effective use in the classroom for engagement and student success.	**Teachers are familiar with Jamboard and can propose effective ways to use Jamboard in their work.**	Lack of knowledge and awareness surrounding the application	Results of surveys and interviews indicate that teachers are not using the application. A few interview respondents indicated that they didn't know anything about Jamboard and would not know how to incorporate it in their classrooms.	Facilitate collaboration in the training. Teachers will form groups and come up with ways that they can use Jamboard in their respective content areas.

Teachers are not using Jamboard in their classrooms and other collaborative works.	**Teachers effectively use Jamboard and incorporate its use in their work**.	Lack of knowledge and awareness surrounding the application.	Survey and interview results indicate that teachers are unfamiliar with Jamboard and don't use it.	Providing teachers with access to training materials that educate them in how to use Jamboard and apply it to their work.
Teachers are not proficient or comfortable using Jamboard.	**Teachers will be able to use Jamboard with reasonable proficiency.**	Lack of knowledge and awareness surrounding the application.	Survey results indicate that teachers aren't comfortable and don't feel proficient in the use of Jamboard.	Providing teachers with access to training materials that educate them in how to use the application.

i. Implications of Gap Analysis for Training Design

Analysis of survey data suggested that most teachers were familiar and comfortable using Google Doc, Forms, Slides, and Sheets. Most teachers used Google Classroom and felt confident with its use. For this reason, the team chose to remove these elements from the training program. The software that survey respondents felt the least familiar and comfortable with was Jamboard. 78% of respondents did not feel confident using Jamboard and their feelings of proficiency correlated to their feelings of confidence. The responses from the interviews largely reinforced

the data collected from the survey. Most of the teachers who participated in the interviews did not believe they needed any additional help for Google Classroom and several of the Google Suite programs but did note that they were unfamiliar with both Google Drawings and Jamboard and didn't know how they would use it in their classrooms. Seeing a need for Jamboard training, the team decided to focus training development on this program.

D. Learner Analysis

To inform design for this training, data was collected from the target audience in the form of a survey, an online interview, and observations from team members. The population for the target audience are teachers who teach at the k-12 level and are employed at one of the two target schools: Missouri Military Academy and Independent Schools of St. Louis (ISSL). The team needed to analyze basic demographics, the teachers' preferences on training delivery, their attitudes toward technology, prior knowledge of Jamboard, and their feelings of proficiency in using Jamboard to inform the design of this project.

Based on the data collected from the teachers, the data indicated that 61% taught for more than 5 years, 33% taught for 3-5 years, 5% taught 1-3 and 0% were first year teachers. The vast majority of the teachers in the sample were experienced. The data also indicated that 68% of teachers taught at the high school level, 39% taught at the middle school level, and 39% taught at the elementary level.

Based on the data collected from the observations from team members, it has been determined that technology training is included in the required professional development service days that teachers at these schools participate in. Using data from the survey, the current need identified for technological training is Jamboard training. 78% did not feel confident using Jamboard and 76% rated their proficiency in using Jamboard below 3 stars (on a 5 star scale).

Category	Data Sources	Learner Characteristics
Years teaching	Survey, Online Interview	The majority of the teachers that responded to the survey have taught for more than 5 years.
LMS experience	Survey	Most teachers have had experience using an LMS, with the top two most used being Canvas and Edmodo
Attitudes toward technology	Observations	Technology positive attitudes
Attitudes toward delivery system	Survey	Most teachers (61%) indicated that they'd rather an online, asynchronous training to be completed on their own time. 39% had no preference or preferred to have in-person training for Google Suite programs.
Motivation for Instruction	SME/Team member notes	Required technology training.

Grade Level	Survey, Interview	The majority of the teachers in the sample teach at the middle and high school levels.
Prior Knowledge of Topic	Survey, Interview	Most teachers were unfamiliar with Jamboard and had little experience with it.

i. Implications of Learner Analysis for Training Design

Based on the learner analysis, the project team determined that they are mostly working with experienced teachers who have mastered the use of many Google Suite programs and have significant experience using various LMS programs. This indicates that the teachers have at least basic skills using both hardware and software for technological resources, so the team has chosen to proceed with the assumption that this prerequisite has been met. Most of the sample teachers did not know about Jamboard and did not know how to use it effectively in their work. The training will tackle both the basics on how to use Jamboard and more specifically, how they can use Jamboard effectively for their content area. Over 50% of the interview respondents did mention that they were not interested in Jamboard training. However, data from both the survey and interviews also showed that the vast majority of respondents are unfamiliar with Jamboard and have little or no experience with it.

Working from the idea that teachers may not be aware of the various advantages Jamboard can have in the classroom and other collaborative work, and the teachers' attitudes of openness to learning new technological resources, the project team has decided to continue with

the training development. The learner analysis did indicate that most of the respondents would prefer an online, asynchronous module, and this project did initially revolve around this concept, but after the analysis phase it was determined that collaboration between teachers would be a major benefit to help teachers determine ways to use Jamboard in their work, and that for these purposes in-person training would be more effective.

E. Contextual Analysis

The contextual variables that were considered for this training include the schools' culture surrounding technology and teacher development, the physical environment and resources available, as well as the settings that the teachers would use Jamboard. Data for the context analysis was mostly collected through observations, with a small amount of supplementary data supplied by the survey and interviews.

a. Orienting Context

Teachers need to know how much of an impact Jamboard can be in their classroom. With the culture of the school encouraging high technology use; teachers should be using technology in an engaging way that positively impacts teaching and learning among teachers and students. Learning new technology applications can improve overall excitement about the implementation of technology.

b. Instructional Context

All teachers have access to computers provided by the school. Most classrooms are SMART board equipped, or a similar resource, for student and teacher use. Training will be conducted in person during professional development training that the schools facilitate. All teachers have access to Jamboard through Google Suite that is provided by their districts. This Jamboard training will have a hands-on approach, with breakout groups for brainstorming, so

training will be done in smaller groups. The schools have various classrooms, libraries, and other communal spaces available for this training.

c. Performance Context

Jamboard is a program included in Google Suite that is provided by the district. Google Suite is not mandated to be used in the classroom but implementing programs like Jamboard could create more opportunities for students and teachers to streamline their learning/teaching, and to foster collaborative efforts for both the teachers and the students. This training will help teachers determine ways to use Jamboard in actual lessons for their specific content areas, as well as how to use it for other collaborative work.

ii. Implications of Contextual Analysis for Training Design

Data analysis revealed that the majority of the teachers would prefer an online, asynchronous module for training. However, analysis also indicated that a collaborative element would be beneficial. As a result, the project team has decided to move the initial training to an in-person format. Data collected from observations indicate that the two target schools have all the resources and the space to support an in-person format for training. Analysis revealed that while interview data indicated that there was little interest in training for Jamboard, the overall technology positive environment of the target schools and the teachers' openness to learning new technological resources, paired with the knowledge that teachers aren't familiar with the various positive elements that Jamboard has to offer, has led the project team to continue its approach to designing an effective, teacher/student centered training for Jamboard.

III. Task Analysis

To collect the data needed for task analysis, the project team reviewed online videos of Jamboard use. For the basic skills of getting started with Jamboard, team members reviewed Google's bank of product videos for Jamboard. For the ways that teachers, specifically, could use Jamboard team members viewed online videos. Finally, team members experimented with using Jamboard to round out data collection for task analysis.

A. Facts/Concepts

Jamboard is a digital whiteboard that allows for real time collaboration of up to 50 people at one time and includes the ability to host video meetings while sharing a board. It can be utilized with a Jamboard device, web browser or mobile app. Components such as Google Docs, Slides, and Sheets may be incorporated into a Jamboard file. Existing skills that are transferable to using Jamboard include writing/drawing with a mouse, searching for and inserting images/text/tables/etc., dragging, and resizing items, file sharing, and hosting/participating in video calls.

B. Procedures

How to get started with Google Jamboard (Web Browser)- Task 1, Objectives 1 & 3

1. Log in to your Google account.
2. Select the Apps icon (waffle).
3. Scroll down until you reach the Jamboard App icon and select. (You can also type in jamboard.google.com to get there).
4. Hit the orange plus icon at the lower right corner of the screen to create a new Jam.
5. Explore and use the tools on the toolbar on the left side of the screen.
6. Tools on the left toolbar include:

- Pen
- Eraser
- Select
- Sticky Note
- Add Image
- Shape
- Text Box
- Laser Pointer

7. Explore and use tools on the top toolbar.
8. Tools on the top toolbar include:
    - Top Left Toolbar
        - Undo/Redo
        - Backgrounds
        - Clear Frame
    - Top Middle Toolbar
        - Create Frame (Top middle on the toolbar)
    - Top Right Toolbar
        - 3 dots additional options: Rename, Download PDF, Save Frame as Image, Remove, Make a Copy, Updates, and Send Feedback to Google.
        - Share
9. Jamboard Jams save automatically to the cloud (Keet, 2020).

For additional support, visit the Teacher's Tech YouTube channel and watch Teacher Tools "How to Use Google Jamboard- Beginner's Tutorial," YouTube video here.

Jamboard as Collaboration Activity (Web Browser)- Task 2, Objective 4

Sharing Your Jam- pt. 1 of activity

1. If it isn't already open, open up the file "Jamboard Training," from your shared folder.
    - Log into your Google account.
    - Select the Apps icon (waffle).
    - Select Google Drive.
    - Select "Shared with Me," from the left panel.
    - Select the shared folder "Training Materials."
    - Select the file "Jamboard Training" from the shared folder to open it.
2. On frame 13, double click the sticky note under the title "Explain and Elaborate," to open the sticky note
3. Copy the URL and paste it into your browser. This will open a forced copy of a Jam for your use for the rest of the training.
4. Rename your Jamboard by replacing the word "COPY" with your name.
5. Share your Jamboard with your training group and members of your department.
    - Select the blue "Share" button on the upper right toolbar.
    - Add people and groups from your training group and department from the list.
    - Ensure that you have made everyone an editor of the document, if they aren't already.
        - Select the black arrow next to their name.

- Select “Editor,” from the drop-down list.

6. Select the done button.

Setting Up Your Jam for Collaboration- pt.2 of activity

1. If it isn’t already open, open up the file that you labeled with your name from the Shared Folder.
    - Log into your Google account.
    - Select the Apps icon (waffle).
    - Select Google Drive.
    - Select “Shared with Me,” from the left panel.
    - Select the shared folder “Training Materials.”
    - Select the file labeled as your name from the shared folder to open it.
2. Move to frame 4.
3. Set the background for frame 4.
    - Select “Set Background” from the top toolbar.
    - Select Google Drive from the options.
    - Select the shared folder “Training Materials.”
    - Select the file “Jamboard KWL Chart.”
    - Select the blue “Select as Frame Background” button on the lower right of that screen.
4. Select “Clear Frame,” from the top toolbar to delete the other items.
5. Select one person’s Jam to use from your group.
6. Open up the file that person shared with the group.
    - In Google Drive, select the “Training Materials” shared file.

- Select the file labeled with that person's name to open it.

7. Work together to complete the KWL chart.

C. Attitudes

The attitudes that teachers would need for success are:

- A willingness to learn
- A basic level of comfort and skill using technology (hardware and software)
- Persistence, to practice the skills taught in the training
- A desire to incorporate Jamboard into their work.
- A desire to take the basics of everyday use to the next level, meaning educators who use the programs but don't use them to their full potential can reap the benefits of less workload further down the road.

IV. Training Design

A. Broad Goals

A broad goal that this program will meet would be less teacher burnout with more effective technology training at the start of the school year. Jamboard training, specifically, will foster a more streamlined method of collaboration between colleagues, as well as students, that will increase effectiveness and efficiency of collaborative projects. A more narrowed goal that this program will meet would have teachers implement something new in their classrooms. Whether using the function "topics" when creating assignments or materials in Google Classroom effectively or utilizing google forms to create digital homework assignments for their classroom.

The signs the project team will use to measure success include teachers feeling more comfortable with utilizing technology in their classrooms and teaching, as well as teachers having successfully integrated and created content with Jamboard. The project team will measure these successes using the post-training survey as well as the follow up surveys that are to be distributed three and six months post training.

The performance changes that the project would see would be an increase in the percentage of teachers utilizing technology in their classrooms. Teachers incorporate something "new to them" that Jamboard offers every marking period.

B. Overview of Training Design

Using information from the needs analysis, the instructional objects and format was created. The workshop format follows the BSCS Five E's framework because it is "a learning cycle based on a constructivist view of learning" (Morgan & Ansberry, 2007). Teachers are constructing their own knowledge that will transfer to use of this platform. The needs analysis determined that most teachers were unaware that Jamboard even existed within G-Suites, let alone the functionality of the application. It was also determined, even though 61% of those teachers surveyed had taught for at least 5 years, 78% do not feel confident using Jamboard.

Instruction was initially going to be delivered synchronously, but that decision was changed to face-to-face for ease and support during the training; therefore, this framework seeks to better support the needs of the teachers. The goal of the training is to empower teachers to use Jamboard in their content areas by introducing them to the multiple ways to engage with the application. Keeping the goal in mind, it was determined that online training modules would be great for support, but not for training. Despite 61% of respondents indicating that they would prefer online training, the decision for face-to-face was based on the 22% who indicated that they

need help more than once a week in G-Suite applications. Considering the high level of need and moderate knowledge base, the training method was adjusted to reflect the data collected in the needs analysis.

The length of time for the training is set at 2 hours and 15 minutes. This amount of time represented the results from the survey and questionnaire that indicated little to no knowledge about Jamboard. In order for the objectives to be met, teachers are allotted ample amount of exploration time to familiarize themselves with the various functions and features that Jamboard has to offer.

C. Instructional Alignment

Learning Objective	Instructional Strategy	Assessment Strategy	Time
Teachers will successfully navigate program set-up and creation of a classroom vision for the program.	**Engagement** – The instructor shows a video of strategies designed to engage learner interest, determine what learners know about the topic and identify any misconceptions.	Teachers will open the Jamboard and successfully add their information on a sticky note.	15 minutes
Teachers will successfully navigate a Jamboard frame using a premade template.	**Exploration -** Using a tutorial made for Jamboard, teachers will complete the action on the Jamboard	After watching the material, teachers will successfully highlight the parts of speech in Jamboard.	30 minutes

Teachers will be able to list ways to integrate Jamboard in their classes.	**Explain -** The instructor will discuss various ways to use Jamboard in educational settings with the group.	Teachers will successfully contribute ideas to the discussion about ways to use it in their classes.	45 minutes
Teachers will use Jamboard to successfully communicate their ideas.	**Elaborate -** The instructor will use a direct instruction strategy to demonstrate how to add their information.	Teachers will successfully complete a sticky note with a way to use the application in respect to their classroom content.	15 minutes
Teachers will create a Google Jamboard that they can use in their content area.	**Evaluate-** Using a gradual release model, the instructor will allow teachers to practice creating content and grade-level specific materials to share with peers.	Teachers will create their own Jamboard to use in their classroom. An exit ticket will be provided in a form of a self-reflection that they will fill out.	30 minutes.

As previously stated, the 5 e's model was chosen based on the use of the constructivist approach in the framework. The constructivist approach was chosen because based on the results of the survey and questionnaire, teachers have abstract knowledge of the use of Jamboard. That is associated with constructivism because the intrinsic nature of the theory states, "Implied is the position that we as human beings have no access to an objective reality since we are constructing our version of it, while at the same time transforming it and ourselves" (Fosnot & Perry, 1996). Because most respondents have knowledge of some Google applications (94.4% feel confident

in using Google Docs, 88.9% feel confident in using Google Slides, 77.8% feel confident in using Google Forms, and 88.9% feel confident in using Google Sheets), their knowledge background exists. Through scaffolding, and intentional instruction, teachers will be able to construct their own knowledge about Jamboard in a way that empowers them to assimilate the application into their instructional approach.

The first learning objective is all about teacher engagement. Introducing them to the content and getting them interested in exploring additional features about the application that can be transferred into use in their classrooms.

The second objective is to allow teachers to experience the platform and familiarize themselves with the features available. For this objective, an expository approach is the most effective instructional strategy. Within this activity, teachers are shown various features that display functionality. Once they have seen the tutorial, then they are given an opportunity to try it for themselves.

The next objective is all about activating schema and drawing from previous experiences that could be streamlined and made easier through the use of Jamboard. They will be asked to share ways that will have a positive impact in their classrooms. This is also an opportunity for teachers to share and collaborate their ideas and materials in order to support other learners in the class.

Going a step further, the following objective is an opportunity for teachers to use some of the ideas and information shared to create their own sticky note Jamboard that could be used in their content-specific area. For this objective, an expository approach is the most effective instructional strategy. Within this activity, teachers are able to transfer their knowledge into practical application by asking teachers to create content relevant to their classroom.

Finally, using the tips and tools that they have been shown, teachers will create their own Jamboard to use in their classrooms. The instructional strategy demonstrated here is the gradual release model. From the first objective to the last, the learning environment shifted from an instructor-led strategy to a student-or in this case-teacher-led strategy that puts them in charge of their own learning.

D. Learning Experiences

Objective 1- Engagement:

Learning Activities:

- Teachers will watch a short TikTok video showing how Jamboard can be used in the classroom.
- Teachers will add a sticky note to the frame stating their name and what they teach.

Assessment:

- In the Engagement stage, there aren't any assessments that take place. Teachers will watch a short video and complete a small task to gain excitement about using Jamboard in their classroom and buy in for the training that is about to take place.

Objective 2- Exploration:

Learning Activities:

- Teachers watch a 14-minute video on their own that will walk the teachers through the tools and tasks that Jamboard has to offer
- After the video teachers have the following activities to complete. These activities allow teachers to explore Jamboard as well as familiarize themselves with the ins and outs.
    - Activity 1: Write a sentence representing personification using a sticky note.

        - Make a sticky note transparent. Size to fit on an existing free sticky note of choice.
        - Teachers will see how collaborating is easy and the ability see students working on the slides
    - Activity 2: Search for an image of an animal that fits in the animal classification.
    - Activity 3: Duplicate a slide and complete the frame in groups on graphing the quadratic
    - Activity 5: Add a sticky note to indicate “How's it going?”
    - Activity 7: Navigate back to frame 6 to complete task 3. Use the textbook tool to write your name when you're done.
    - Navigate to the last frame to close the exploration stage.

Assessment:

The training team will be circulating the room as teachers are completing the tasks. They will answer any questions that arise. But instead of giving the answers, they will guide the teachers to figure out the answers on their own.

Objective 3 & 4- Explain and Elaborate:

Teachers will create their own force copy of the training part 2 Jamboard. The link is located on the last frame of the initial training Jamboard.

These two Es will go hand-in-hand. Trainers will explain the different activities and teachers will complete the tasks that go along with what is being taught.

Learning Activities:

- Change Name of Jamboard.
- Share Jamboard with their department and with a training member.

    - Ensure the teacher gives editing rights.
- Explore Tools. Teachers will complete the 3rd frame that walks them through 6 tool tasks.
    - Task 1: Use the pen to write their name.
    - Task 2: Use the eraser tool to erase HELLO.
    - Task 3: Highlight the word THIS in the sentence.
    - Task 4: Insert a sticky note.
    - Task 5: Insert a circle and Triangle.
    - Task 6: Use a text box to answer the question "What did you do last weekend?"
- Collaborate with team department members:
    - One member from the department will insert the KWL chart that is located in the shared training folder.
    - The member will clear the frame to reveal the KWL chart.
    - The other members of the department will open the Jamboard of the one member that inserted the KWL chart and will use the sticky notes to insert their K and W into the chart. The members will have selected their own color of sticky note.
    - Teachers will return to their own Jamboard.
    - Teachers will do a Think-Pair-Share on how this activity can be useful in their classroom.
- Make an image from a frame.
    - Teachers will follow along with the "guided" notes from the trainer. They will use the eraser tool to reveal the "missing" words.
    - Teachers will read and delete the sticky note on the frame.

    - Teachers will follow the steps provided to download the frame as an image.
    - Teachers will insert a blank frame.
    - Teachers will insert the downloaded image as the background to the newly created blank frame.
    - Teachers will do a Think-Pair-Share on how this activity can be useful in their classroom.
- Drag-and-drop.
    - Teachers will watch a short video on different ways to use drag-and-drop in the classroom.
    - Teachers will graph a line.
        - Teachers will use the pen tool to indicate the slope and y-intercept.
        - Teachers will drag the points onto the graph
        - Teachers will use the pen tool to connect the points
    - Teachers will do a Think-Pair-Share on how this activity can be useful in their classroom.

Assessment:

Trainers will roam the room as the tasks are being completed. Help will be given more 1-1 if needed. This is more of a formative assessment to ensure teachers are doing the tasks, getting their questions answered and sharing ideas.

Objective 5 Evaluation:

Teachers will create a 5 frame Jamboard from a topic of choice. Something that can be implemented in their classroom today!

- Frame 1: Title slide

- Frame 2-4: Activities
    - Create 3 different activities that go along with the topic
- Frame 5: Closure Frame

This Jamboard will be shared with department members and trainers.

Assessment:

Trainers will look through the Jamboard for activity relevance to the topic of their choice. This is a summative assessment showcasing that teachers can easily implement Jamboard into their lessons as a supplement and in an engaging way.

An exit ticket will be given to the teachers providing feedback on the training.

E. Assessment Plan

1. During training, learners will be informally assessed during the engagement stage. The trainer will walk in close proximity, ensuring that all learners are able to access Jamboard successfully.
2. The next formative assessment will take place after the Jamboard are created and sticky notes are added. The trainer will assess the mastery of teacher knowledge.
3. Formative evaluation will continue informally with discussion and questions during the training
4. Summative evaluation will take place during the self-reflection phase
5. Summative evaluation will take place in the classroom during teacher evaluations
6. For a confirmative evaluation, a survey will be sent out six months after the training to ensure retention.

F. Implementation Plan

1. Technology Needs:

a. Teachers will need their own laptops
b. Teachers will need their own headphones
c. Teachers will need access to Google Drive
d. Trainers will need a laptop
e. Trainers will need a projector
f. Teachers and Trainers will need access to internet or wifi

2. Room Layout:
    a. Teachers will need to be sat in groups by department
    b. Room should have space to allow for easy roaming by trainers
3. Resources and Other Materials Needs:
    a. Training File will need to be shared to Teachers.
    b. Teachers will need trainers' emails
    c. Copy of Exit Slip made for every teacher attending the training
    d. Extra pens/pencils provided for teachers who didn't come with any.

Timing Considerations:

1. Prior to Activity:
    a. Teachers will be working in groups by departments.
        i. If a department is under 3 members, departments will be combined to increase size for the collaboration frames.
            1. Administrations will share department sizes before training to indicate groups working together
    b. Teachers will need access to the shared Google Training File.

c. Teachers will not be allowed to work independent on frames that require collaboration

d. Teachers can think-pair-share with someone close to them.

   i. Think: Alone

   ii. Pair: Group size 2-3

   iii. Share: Whole Group

e. Technologies that will be used include individual laptops and headphones

2. During Activity

   a. Teachers will complete the various activities.

      i. Teachers will need laptops and headphones.

3. After Activity

   a. Teachers will complete an exit slip.

      i. Teachers will need an exit slip (provided by trainers) and pen/pencil.

V. Evaluation Plan: 15 points

A. Formative Evaluation

Formative evaluation is a kind of measurement for instructional designers to evaluate the instruction and instructional materials with the aim of obtaining feedback, which in turn drives revision to make the project more efficient and effective. In this project, formative evaluation will be conducted through three ways to obtain feedback about the development of the project and learners' satisfaction: expert review, one-to-one (usability test), and small groups.

a. Expert Review

The purpose of expert review is to obtain feedback to recognize and remove the most obvious errors in the instructional materials. Subject matter

experts (SMEs) will be invited to check the materials of this project after the project draft is finished. The first reviews will be conducted through emails or zoom sessions. The aspects for expert review will include content quality and clarity, instructional design integrity, technological feasibility, and general attitudes about motivation and context. Notes will be recorded, and revisions will be made according to Subject Matter Experts' comments and suggestions.

b. One-to-one (Usability Test)

A usability test will be implemented after expert review. Instructional designers of this project group will recruit 2 trial learners and ask them to complete a unit of learning. Designers will observe learners' behaviors during this time and record, if necessary, in the form of note taking. The evaluator should encourage the learner to discuss what they see, write on materials as appropriate, and note any errors. After learners finish a unit of learning materials, designers will give them a survey to collect information about what they think about this training project and how satisfied they are with this form of the training project. Revisions will be made according to the trial learners' feedback.

c. Small Groups

After revising small errors found from expert review and the usability test, small groups would be conducted. A group of five representative learners will be recruited by the instructional designers for this project. Firstly, the representative learners will be given the necessary instruction and then they will learn the materials by themselves without interaction from instructional designers. The instructional designers will observe, but not intervene. After the instructional

lesson is complete, the representative learners will be asked to complete a post-assessment, designed to provide feedback about the instruction, as well as a survey to collect information about how they feel about this training project and what problems they may meet. Revisions will be made according to learners' feedback.

B. Summative Evaluation

Summative evaluation is to evaluate if the problems are solved and if the training project achieves its efficiency and effectiveness. Instructional designers should not only consider learners' learning outcomes but also the cost-effectiveness and return on investment (ROI) and some other things. In this project, instructional designers will use an end-of-training survey and summative assessment results to evaluate this training project. The key summative evaluation questions are if the teachers have mastered how to use Jamboard and if learners will use Jamboard in their daily classrooms to enhance the quality of classes.

a. End-of-training Survey

After learners finish the training, instructional designers will provide them with an end-of-training survey to collect data about what they have learned from this training, what difficulties they met, and what suggestions they may have. This summative method aims at examining the teachers' learning reactions.

b. Summative Assessment Results

After the teachers finish the training, they will be given a post-test to examine if they acquired the intended knowledge and skills. They will also be asked to complete a lesson plan, where Jamboard should be included to improve

the quality of the class. This summative method aims at examining the teachers' learning outcomes.

C. Confirmative Evaluation

Confirmative evaluation will be used to evaluate the transfer of knowledge. The training project will be followed up with a confirmation evaluation three months later. The instructional designers will use a checklist, class observation, and interviews to examine the teachers' behaviors and learning results.

a. Checklist

Instructional designers will provide teachers with a checklist, which will include details about whether the teachers use Jamboard in their classroom. With this checklist, the teachers have opportunities to reflect if they transferred the knowledge and skill learned from the training project into a new performance context.

b. Interviews

Instructional designers will conduct interviews with some of the teachers to gather details about how they are using Jamboard in classrooms. For example, designers will ask how the teachers use Jamboard in their class, how often, if there are any difficulties in using Jamboard in class, and what is the effect of using Jamboard in class.

c. Classroom Observation

Instructional designers will come into a classroom and observe how the teachers combine Jamboard with their lesson plan, with the teacher's permission.

During the observation, designers will observe carefully and take notes when necessary.

V. Instructional Materials/ Prototype

VI. Appendices (As Needed)

Survey Questions

Q1. How many **total** years have you taught K-12? The years do not have to be consecutive. Please select the **total** amount from below.

Q2. How many years have you worked as a teacher at your current school? Please select the number of years from below.

Q3. What grade level and subject(s) do you teach? Please select what grade level you teach and then type the subject(s) you teach in the box below. Select and complete all that apply.

Q4. What learning management systems *other than* Google Classroom have used before? Please select all that apply.

Q5. How often do you use Google Classroom ***per week***? Please select the answer that best describes your usage.

Q6. How often do you use **any** program from Google Suites ***per week***? Please select the answer that best describes your usage.

Q7. Please select the answer that best describes your feelings about the statement below.

I am confident in my ability to use **Google Classroom**.

Q8. Please select the answer that best describes your feelings about the statement regarding your level of confidence in using each of these programs from **Google Suite**.

Q9. How would you rate your proficiency in using **Google Classroom**?

Please select the option below that best describes your proficiency in **Google Classroom.**

Q10. Please rank your proficiency in using each of the programs from **Google Suite** listed below.

Choose the number of stars that best describes how proficient you feel, with **1 star not proficient** and **5 stars being highly proficient.**

Q11. How often ***per week*** do you need help using *Google classroom*? Please select the answer that best describe the amount of help you require ***per week.***

Q12. How often ***per week*** do you need help using programs from *Google Suite*? Please select the answer that best describes the amount of help you require ***per week.***

Q13. Asynchronous online training would involve watching videos and completing modules and assignments online and on your own time. In person training would involve completing modules and assignments while attending a scheduled event during work hours.

Which sentence best describes your feelings about the format of training for **Google Classroom?** Please select the answer that best describes your feelings to the statement below.

Q14. Asynchronous online training would involve watching videos and completing modules and assignments online and on your own time. In person training would involve completing modules and assignments while attending a scheduled event during work hours.

Which sentence best describes your feelings about the format of training for **Google Suite.** Please select the answer that best describes your feelings to the statement below.

Link to the preview of the survey here.

Interview Protocol

We conducted interviews using an online fillable form format. When reviewing the data from round one, it was noted that participants would want to conduct training virtually on their own time. Therefore, we decided to send the interview questions via a Google Form.

Interview Questions

What is your name?

What grade level(s) do you teach? Select all that apply. You can use the other option to be more specific if needed.

1. What main problems do you meet when you are using Google Classroom? If you don't have any problems with Google Classroom - please indicate as so.

2. What main problems do you meet when using Google Suites? Google Suites includes Google Docs, Google Slides, Google Sheets, Google Forms, Google Drawings, Jamboard.

3. What help do you need on Google Classroom/ Google Suites?

4. Who do you see help from?

5. For those who don't use Google Classroom in their classroom or don't use it often, why? Are you using other programs? (Note: If you use Google Classroom Suites just write n/a to this question.)

6. For those who don't use Google Suites in their classroom or don't use it often, why? (Note: If you use Google Suites often, just write n/a to this question.)

7. When, if ever, and where did you receive formal training on Google Classroom and or Google Suite programs? Meaning did a past or current school preform training? How was this training conducted?

8. Did you know that Google Suites offers extensions within the programs? For example: Google Docs and Google Slides, you can use Hypatia Create to insert math equations into your document. Google Slides, you can use PearDeck to create interactive lessons with your students that you send out via Google Classroom. OrangeSlice: Teacher Rubric. Google Forms, you can add a one-click timer that counts down for your forms.

9. For training purposes, what extensions do you think would help you out that we can research/provide videos on to help support and make your classroom run easier?

10. Would you want training to see how Jamboard can be used in your classroom? If yes, please indicated what subject area you would like.

11. Did you know that Jamboard can be used during Google Meets? Would you want more information on that?

12. Would you want training to see how Google Drawings can be used in your classroom? If yes, what subject area would you like?

13. Google Docs can be used for more than just writing papers and creating essays. One way that it can be used is by creating "hyperdocs." This allows you to hyperlink different PDFs and Videos into the documents for students to use to explore concepts in different ways. Would you be interested in training videos showing these techniques that you can use in your classroom?

14. What aspects do you want to be trained on in Google Classroom/Google Suites?

Observation Guide

Date	
School	
Building	

Environment					
Classrooms					
% of Classrooms with Computers (Approx.)	• 100 • 75 • 50 • 25 • Less than 25	% of Classrooms with Smartboard, or equivalent (Approx.)	• 100 • 75 • 50 • 25 • Less than 25	% of Classrooms with Computers for Students	• 100 • 75 • 50 • 25 • Less than 25
ADA Compliance: Yes No		Notes:			
Potential Training Spaces					
ADA Compliance:		Notes:			

Yes No		
# of Potential Spaces for Training		Notes:

Culture	
	Notes
Teacher Attitudes	
Use of Technology	
Evidence of Tech Support	

Additional Notes

References

Fosnot, C. T., & Perry, R. S. (1996). *Constructivism: A psychological theory of learning*. Retrieved from http://beyondbitsandatoms.org/readings/fosnot_constructivism_1996.pdf

Google. (n.d.). *Get started with Google Jamboard*. Google Jamboard training | teacher center | google for education. Retrieved October 2, 2022, from https://edu.google.com/intl/ALL_us/for-educators/product-guides/jamboard/?modal_active=none

Morgan, E., & Ansberry, K. (2007). BSCS 5e instructional model. In K. Ansberry, & E. Morgan, *More picture-perfect science lessons: Using children's books to guide inquire, K-4 (pp. 29-34)*. Arlington, VA: National Science Teachers Association Press.

YouTube. (2020). *How to Use Google Jamboard - Beginner's Tutorial*. *YouTube*. Retrieved October 2, 2022, from https://www.youtube.com/watch?v=GbytD_LNVNM.