



Powered Performance

Instructional Design and Training

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Title: Operation Success: Study Skills Integration for K-12 Instructors

Analyze

Instructional Problem

K-12 teachers design lessons solely focused on content or subject area without infusing study skills to help their students know how to access and process the knowledge (Ackerman & Perkins, 1989).

Intended Target Audience

The intended audience for this training is K-12 instructors who have high-stakes testing attached to their subject area. These are educators that teach the core subjects of English, mathematics, science, and social science.

Learning Outcome

Instructors will be able to develop lessons that infuse content-based instruction with study skills so that their students not only learn about the subject area, but how to process the information and acquire the knowledge.

Learning Objective

As a result of this training, the instructional staff will be able to add study skills exercises and student self-evaluation checks to the beginning, middle, and end of their lesson by pairing study skills to subject area content.

Project Overview

K-12 instructors that teach core subjects, especially those attached to high-stakes testing, will be trained in a more holistic approach to lesson planning and instruction. Their students may grasp the

facts and figures of math, reading, science, and social studies but not know how to complete multi-step tasks successfully or understand how to comprehend and retain large pieces of information. Akin to teaching someone how to drive a car or how to cook a meal, it is not enough to just be placed in a car or be given the ingredients, instead in both of these scenarios, the process to operating a vehicle or having a finished meal is what must be understood. K-12 teachers can see an improvement in test scores and overall student achievement when they not only focus on the core curriculum, but the ‘metacurriculum’ [sic] (Ackerman & Perkins, 1989). Teaching students how to tackle tasks within a subject area will lead to more optimal outcomes. Instructors will learn how to facilitate this through training that will teach them how to improve their lesson plans by walking their own students through the process of learning.

Data Planning

One important way to gather data to ensure the optimal effectiveness of training is by sequencing the skills and knowledge both already possessed by the learner and how they will be approached (Rothwell et al., 2016).

Data will be collected through a series of interviews with subject matter experts on “study skills and habits [as] a form of metacognitive processing because they help students during the learning process to acquire, retain, and produce the new information” (Al-Hilawani, 2016). Learners will also be given a pre-learning survey about their current practices in lesson planning and their knowledge of Study Skills Integration with a survey I create through Google Forms. The results will be used to determine the level of emphasis for the content to ensure learners are targeted based on what they already know and where learning gaps still occur.

Link to survey: https://docs.google.com/forms/d/e/1FAIpQLSdQ1_Or5-kcZkr6TFYeMs5wyW4Ano2kC2kRvkCmInE4ob2t8Q/viewform?usp=sf_link

SME Checklist

I will consult with two subject matter experts (SME), Diana Parfait and Lisa McLeod. Diana Parfait has been an administrator and principal for over two decades. She is currently over the AVID program at Gainesville High School in Gainesville, FL which is a program that takes a cohort of students and explicitly teaches them skills in notetaking and organization and Lisa McLeod is a former teacher and administrator who helped establish the AVID program. They both work to improve the performance of struggling students across content areas. I will ask them the questions listed below.

- What are the top three problems that students have in the areas of note taking?
- What methods do you take to teach effective note taking?
- How long do you practice note taking skills with students?
- Do you teach organization in a step-by-step process?
- What are the top 3-5 things you teach students about organization?
- When students begin to grasp notetaking and organization, how do you apply it to each of their classes across content areas?
- How do the study skills needed to successfully accomplish tasks change based on the subject matter?

- What are best practices to ensure that students establish these study skills as a routine and habit?
- What do you suggest teachers do in the classroom to reinforce these habits and routines?
- How are students kept accountable for these practices?

Since both of these SMEs have long worked in this field, it will be important to “honor their content” by retaining the “tone and voice” of the practices they have established already. Since they work in the same setting as the learners, they will be accessible and this will remove the disinterest that can sometimes be a risk when working with SMEs long term (Miller, 2014).

Instructional Systems Design Approach

The ADDIE process will be used as the framework for this training. The Analysis phase will be applied by doing an audit of district pacing guides and standards that teachers must teach along with current training programs housed in the district’s Professional Development department to determine gaps. Interviews will also be conducted including teachers, administrators, and K-12 students including Student Perception Surveys. The Design phase is where the eLearning module will consider how to simulate realistic classroom and lesson planning scenarios for the instructional workforce. The Development phase will be a collaboration between the instructional designers and the district’s Professional Development department to determine which capabilities their current LMS has to deliver the content as outlined in the Design phase. The Implementation phase will begin with the administrators at each school alerting the instructional workforce in a faculty meeting of the nature and start date of the training. This phase will continue with the district’s Professional Development department sending learners directions for signing into the training. The Evaluation phase will happen when learners are observed by their administrators with a lesson plan revised in response to the eLearning module. As managers, administrators will base their evaluations on their previous training in effective Study Skills Integration so they can “fully leverage training benefits” (Andriotis, 2018).

Primary Theoretical Framework

Andragogy will be the primary theoretical framework utilized for this training (Knowles, 1984, as cited in Calamari, 2018). This is the acknowledgement that adult learners have different needs than non-adult learners. Since this is a training for K-12 teachers, it is imperative that the training does not look exactly like what the learners do in their own classrooms, but instead are given the most effective methods in their training. Teachers often have many things thrown at them at the same time. Therefore, as Knowles states, they must know the reason behind what they are learning, have a real-world task to complete, have a training that considers various backgrounds, and employs learner freedom.

The four principles of Andragogy are as follows:

1. Adults need to know why they need to learn something
2. Adults need to learn experientially,
3. Adults approach learning as problem-solving, and
4. Adults learn best when the topic is of immediate value (Knowles, 1984, as cited in Calamari, 2018).

To apply this theoretical framework to the Study Skills Integration training they will: 1) need to know the purpose of the training 2) instead of only being given more reading and theory, they will

be engaged in a project-based manner through the creating their own lesson plans rather than a focus on memorization 3) given that the training will be for K-12 learners, there will be different tracks in the eLearning tailored to different learners by subject area and elementary, middle, and high school levels, and 4) the training will allow the learners to make their own discoveries that are applicable to their own teaching practice. This will be the component that allows them to refashion their own lessons based on what they have previously taught and come up with conclusions on their own of how best to implement study skills.

Furthermore, the collaborative nature of the follow-up after teachers have completed the eModule will follow the Professional Development Cycle for Continuous Improvement. This is a five-step cycle that involves the following: “identifying student learning needs, identifying related teacher learning needs, learning or reviewing concepts, applying concepts to lessons, and a critique/reflection on the lesson” (Stewart, 2014). This implementation will ensure that the instructional workforce as a whole maintains a culture of explicitly teaching study skills to students while delivering content area material.

Design and Development

Learning Objective

As a result of this training, the instructional staff will be able to add study skills exercises and student self-evaluation checks to the beginning, middle, and end of their lesson by pairing study skills to subject area content.

Content and Activities

Content including topics and activities

All instructors that fit the above criteria will get a link on the school district’s official professional development platform which tracks teacher trainings for the district to register for points that count for Florida Professional Educator Certificate Renewal. All administrators will be required to complete a short, one hour module in the summer by the PD department before the rollout to the teachers. The web site will deliver tailored training depending on if they teach elementary, middle, or high school. The module will be a mix of information slides and quizzes along with avatar simulations with immediate feedback and different scenarios based on the choices. Avatar simulations between a fictional teacher and student will be the primary basis of training in which teachers will view various lesson planning scenarios and the impact they have on various students. Instructors will have to choose best practices for struggling students and see lesson plans and do drag and drop activities to figure out which plans best facilitate teaching students study skills. The follow-up to the training will involve the Professional Development department leading a component either through Zoom or in-person. This will involve instructors bringing a lesson plan they have used before and modify it to include Study Skills Integration. Administration at each school will then conduct the annual teacher observation and observe the Study Skills Integration lesson in action while filling out a rubric to assess how well the teacher incorporates this new model. Those who score high on the rubric will present how they have adapted their instruction in the next training session and those who score poorly will remediate online and be given another chance to either adapt their lesson once more or adapt a new lesson for observation before the next training session.

Content Outline

1. Defining concept – Learner will sign into module and be required to read definition of Study Skills Integration, the rationale, and purpose for learning
2. eLearning module – Learners will be taken down a path specific to their subject area and be guided through a series of teacher-student simulations with feedback based on correct or incorrect answers
3. Practice - Exercises such as identifying areas in sample lesson plans through drag and drop activities and formative and summative content quizzes about information learned from simulations will be conducted to test for understanding
4. Observation – After learners successfully complete eLearning module, they will attend an instructor-led follow-up training from the site professional development department to debrief what they have learned with their colleagues either in person or through a video conferencing platform. They will be given the directions to modify an existing lesson plan to implement Study Skills Integration
5. Assessment – Learners will be observed by their administrators utilizing a rubric that assesses their application of Study Skills Integration in their lesson plan.



Environment

Learners will take the self-paced Study Skills Integration eLearning module online via the Learning Management System used within the district's Professional Development department. They will complete the one-hour module in their classrooms. After a break, learners will then meet for the instructor led training (ILT) portion either online or in-person with other educators who are taking the training. Learners will be able to discuss what they have learned in the module and have whole group discussion about how they will apply this to their lesson plans and the benefits it will have for students. The next week, learners will make appointments with their administrators to observe the sample lesson plan in their own classrooms.

Interactions

Learners will interact with fellow instructors at their school through whole group discussion and debriefing trainings after completing online modules to further extend the learning that happens online through individual, self-paced virtual training. The pairing of the eModule with both collaborative discussion and lesson plan modification/observation will increase the depth of training from professional development to “professional learning” where the focus moves from only learning from the content in the eModule to a “community of practice” (Stewart, 2014).

Measurement

Instructors will implement Study Skills Integration into their lesson plans. Proficiency will be achieved when there is at least one activity per lesson that includes study skills and when administrators report 70% or more of their instructional staff have included study skills in their lesson planning during their yearly observations. Furthermore, there should also be at least a 20% increase in the pre- and post-Student Perception Surveys taken by students that ask them to identify Study Skills Integration in the lessons their teachers give.

Time

eLearning module will take an hour to complete. Learners will work independently for this part of the training. They will be notified two weeks in advance and have two weeks to complete the module on their own time. After the module is complete, instructors will sign up for half-day trainings either in the morning or the afternoon to work with colleagues while led by the district's Professional Development department in hands-on activities and whole group discussions. These half-day trainings are three hours long, either from 9am-12pm or 12:30pm – 3:30pm. In this meeting, the instructional workforce will be given parameters to apply the training from the eLearning module to an existing lesson plan for administrative observation the following week. After observation is complete, learners will attend one last debriefing training session after school. Total time is two weeks, non-continuous. The length lends itself to changing the district's culture by making this a practice that is observable and measured by all managers moving forward.

Sample Content

Script and Storyboard

60 second video Script and Storyboard. Click [HERE](#)

Video Presentation

<https://youtu.be/RBLJhKrRCyI>

With the increase of standardized testing, teachers increasingly focus on their content areas. However, the 'metacurriculum' often gets neglected. The metacurriculum "is comprised of learning skills and strategies" that are "integrated across subjects" (Ackerman & Perkins, 1989). Study Skills Integration is a method where teachers can not only teach their subject, but also teach students how to process the information needed to successfully accomplish a task. This 60 second video is an introductory lesson on how to incorporate Study Skills Integration into instruction. Similarly, to how driving a car or cooking a meal requires technical education, Study Skills Integration is based on the notion that students cannot complete assignments without being taught how to think about the material. The lesson in the video defines the purpose of Study Skills Integration and how to incorporate this method into lesson planning.

Assessment

Multiple Choice Assessment

1. The need for Study Skills Integration is compared to which life tasks?
 - Driving a car
 - Completing a math test
 - Doing a science project
2. K-12 learners often experience having to complete assignments without knowing how to _____.
 - Study
 - Read
 - Take a test

3. Students must be taught how to interact with and _____ to accomplish tasks successfully.
 - Finish homework
 - Memorize lectures
 - **Process information**
4. Study Skills Integration should be _____.
 - Taught separately from the content
 - **Incorporated and added into the lesson**
5. Study Skills Integration can be added to instruction by all of the following EXCEPT
 - **Only including questions about the subject area**
 - Having students write down lesson objective in their own words
 - Making students write a plan to accomplish tasks
 - Including reflection questions for students to self-evaluate performance

Answer the following questions with a short answer.

6. Describe the effect of only teaching content area without Study Skills Integration.
7. How does driving a car or cooking a meal without being taught how to relate to the experiences of many K-12 learners?
8. Why is teaching content alone not enough to make students successful?

Study Skills Integration Assessment Link

<https://forms.gle/ANG8xqqVDDaEYGZh9>

The introductory lesson to Study Skills Integration is vital to a teacher's understanding of why this method is important. Without the realization of this missing link in lesson planning, teachers will continue to prioritize their content without realizing the need for their students to be taught how exactly they must approach each task. The advantage of teachers being trained in this approach is that "students develop the selected [study] skills, with an eye toward improving their performance in the content learning activity" (Ackerman & Perkins, 1989). The Study Skills Integration Quiz includes multiple choice questions directly addressed in the video lesson. Open-ended questions are included also to ensure that there is opportunity for learners to draw larger conclusions beyond just the video content and think critically (Pappas, 2015).

Evaluation and Implementation

The primary method through which we will evaluate the impact of this training and whether the objective have been met will be through the use of Kirkpatrick's Four Levels. This evaluation model consists of "a focus on learner satisfaction" (Level 1), "acquisition of new knowledge" (Level 2), "examining learner transfer from the classroom to the workplace" (Level 3), and "the impact of the intervention on organizational or business outcomes" (Level 4) (Rothwell et al., 2016, Chapter 14). While it is common practice to conduct evaluation at the first two levels, this evaluation will include all four levels for both the purposes of collecting both short-term and long-term evaluative data. While levels 1 and 2 ensure that the learner experience and basic knowledge was obtained, levels 3 and 4 will have implications for changing the organizational structure as a whole. This method was chosen both for its ability to measure structural changes in the long term

and the potential for strong quantitative data that will be in line with district and state requirements alongside school-wide data to track student improvement in the classroom.

Evaluation Planning

Each level of this evaluation model is further explained below with the sample corresponding evaluation.

Level 1 – Reaction Criteria

To determine the satisfaction of the learners, there will be a post-training survey. There is a total of 18 multiple choice questions. 13 of the questions are closed-ended using a Likert scale with a linear range of 1 to 5 based on degrees of learner agreement with each statement. Learners will be surveyed on the facilitator's effectiveness, the timing allotted for given tasks, the accuracy of assessments, and the overall environment. Though learner perception of the content is important and will be addressed at Level 2, understanding the conditions in which the training was conducted is equally important to determining the overall effectiveness of the training and other factors that may have affected the learners' ability to retain the information. The results of this survey can be used immediately to improve the training for the next set of teachers that will take the training in the next cycle.

- [Post-Training Survey Link](#)

Level 2 - Learning Criteria

A summative assessment will be used after the eModule is complete. The results of this assessment will be sent automatically to the learner's administration and professional development team to determine how the learner moves on to the next phase of the training. Learners that do not meet a 75% score will automatically be given the opportunity to try the assessment again. If the score is not met the second time, learners will need to redo the eModule for a last and final try. If learners do not meet the 75% after the third try, administrators and the professional development department will decide on an intervention, such as reading additional material and reflection. If this form of intervention is needed, the learner will have an opportunity to provide feedback and be a part of their own remediation process while being allowed to do the whole-group meeting and the follow-up lesson planning observation. The questions from this sample set include some identical introductory module questions from the *Sample Content* section on page 6 of this design brief along with additional examples of questions reflective of further modules past the introduction.

- [Post-Training Assessment Link](#)

Level 3 – Behavior

Level 3 of the Kirkpatrick evaluation model focuses on how behavior is changed and human performance is enhanced as a result of the training (Rothwell et al., 2016). This level of evaluation is detailed in the *Design and Development* section of this document under a subsection titled, "Time" where it is explained that, "After the module is complete, instructors will sign up for half-day trainings either in the morning or the afternoon to work with colleagues while led by the district's Professional Development department in hands-on activities and whole group discussions. These half-day trainings are three hours long, either from 9am-12pm or 12:30pm – 3:30pm. In this meeting, the instructional workforce will be given parameters to apply the training from the eLearning module to an existing lesson plan for administrative observation the following

week. After observation is complete, learners will attend one last debriefing training session after school.”

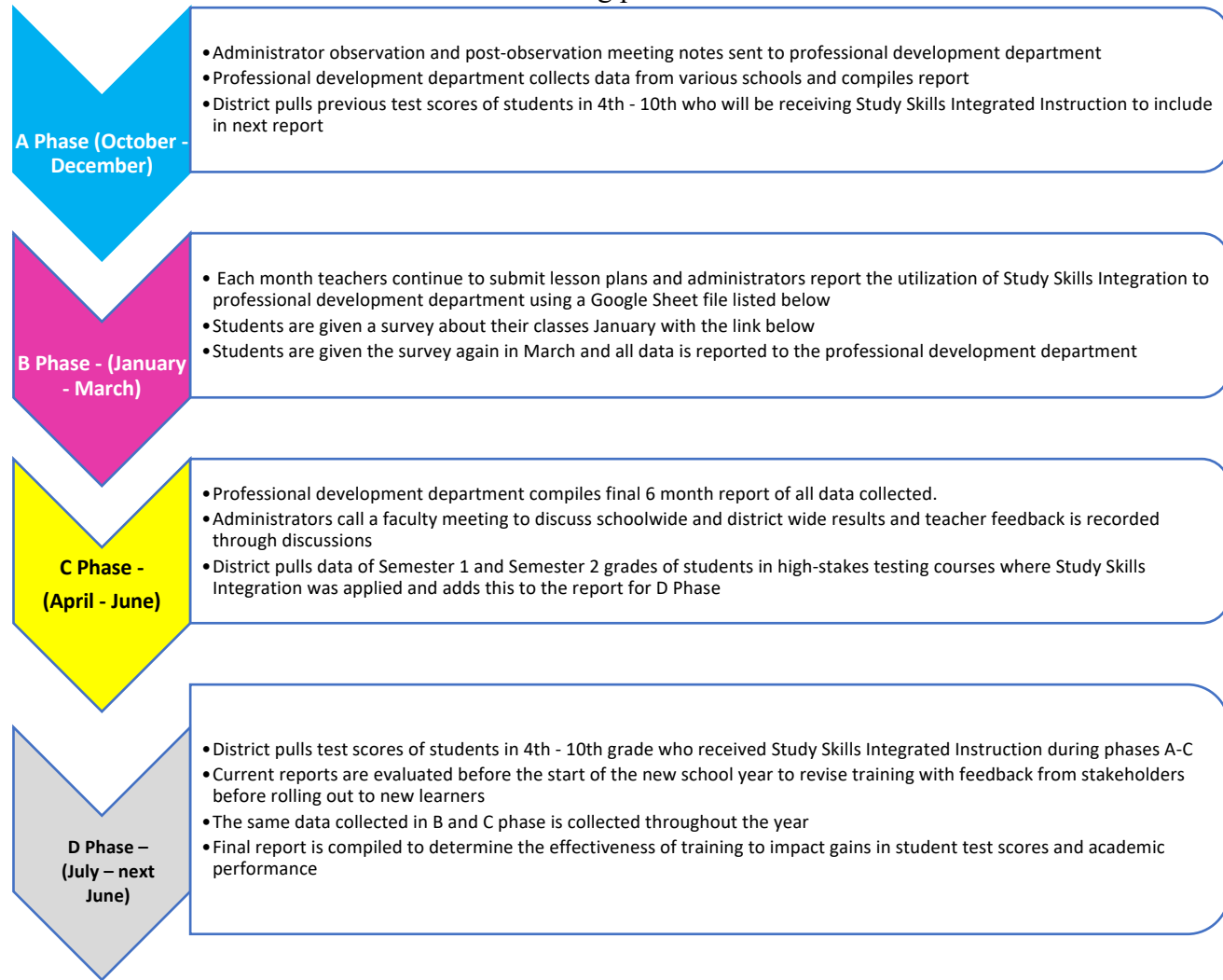
This type of Level 3 evaluation is called direct observation which “is a means by which to evaluate transfer of learning...by a training professional, manager, or peer” (Rothwell et al., 2016). In this case, direct observation will be carried out in conjunction with the school site administrators and the district’s professional development office. For this evaluation, the following rubric will be used to observe the lesson plans that the learners will need to create. The markers of highly effective, effective, developing, and needs improvement follows the designations already used for statewide teacher evaluations to allow both managers and learners to understand the expectations.

	Highly Effective: 25 points	Effective: 20 points	Developing: 15 points	Needs Improvement: 0
Included student-friendly definition of Study Skills Integration at beginning of lesson	Learner provided definition of Study Skills Integration and led whole group discussion with students about the purpose of the concept.	Learner provided definition of Study Skills Integration and discussed it further with students, yet did not lead discussion with students to introduce concept.	Learner provided definition, but did not require students to interact with it nor did they introduce Study Skills Integration further	Learner did not provide any framework by which students could be introduced to Study Skills Integration
Opportunities for students to engage with Study Skills Integration during content area lesson	Learner included 3-5 questions and/or activities in the middle of the content-based lesson where students were responsible for both the subject area tasks and the application of study skills to accomplish the task.	Learner included at least 2 questions and/or activities throughout the content-based lesson where students were responsible for both the subject area tasks and the application of study skills to accomplish the task.	Learner included only 1 question and/or activity throughout the content-based lesson where students were responsible for both the subject area tasks and the application of study skills to accomplish the task.	Learner did not include any Study Skills Integration questions or activities to their content-based lesson.
Students given metacognitive activity at the end of the lesson to reflect on their learning.	Learner included a reflective question or peer activity to allow students to detail their own process for learning that engaged students in this type of thinking for at least 10 minutes (observed either on Day 1 or Day 2 of the lesson).	Learner included a reflective question or peer activity to allow students to detail their own process for learning that engaged students in this type of thinking 5-7 minutes (observed either on Day 1 or Day 2 of the lesson).	Learner included a reflective question or peer activity to allow students to detail their own process for learning that did not sufficiently allow students to discuss their process of learning and/or was less than 5 minutes.	Learner did not include any metacognitive reflection at the end of the lesson.
Plan for students to use any of the study skills in the current lesson for their next task/assignment.	Learner included a written plan for tracking and keeping students accountable for using one of the study skills from this lesson to improve their next assignment.	Learner mentioned a well-thought-out plan for tracking and keeping students accountable for using one of the study skills from this lesson to improve their assignment, but has not yet included the full plan in the lesson.	Learner was able to discuss a plan in the post-observation debriefing, but the plan does not fully keep students accountable to use the study skills in their next task/assignment.	Learner did not derive a plan to track and keep their students accountable for using study skills from this lesson to improve their next task/assignment.

TOTAL: ____ / 100

Level 4 – Results Criteria

This level goes beyond the application of the learning and helps to determine if the training made an organizational impact (Rothwell et al., 2016). This level of evaluation will take place after Kirkpatrick’s Level 3 evaluation and will be conducted long after the initial training has taken place. Though Level 4 evaluates a more holistic type of effectiveness, it will be contingent upon Level 3. Level 4 will be measured in the following phases:



Phase 4 Evaluation Links:

- [Administrator Report Form for the Implementation of Study Skills Integration \(SSI\)](#)
- [Study Skills Integration Student Experience Survey](#)

Implementation

Intervention

The training will begin with the school district's professional development department and administrators attending their own facilitator training with the instructional design team to learn the components of the training, review material, provide feedback, and ask questions. This will take two weeks to complete. The various activities are in a blended learning format.

Once administrators and the professional department have received facilitator training, they will set up the eLearning modules with their IT team on the preferred LMS and registration systems that are already used for all other trainings in the district. This will take one week. From there, the instructional staff will be notified of all parts of required training through their administrators in the first month of the school year. They will have a window of two weeks to complete the self-paced online eLearning module that takes an hour to complete with remediation opportunities. Learners will be given a window of two weeks to take into consideration the sufficient time needed to them to settle into duties of the new school year.

Once the eLearning is complete, the training will then move to an Instructor-Led Training (ILT) component that will happen via Zoom, Google Meet, or another preferred video conferencing platform. After the module is complete, learners will be alerted via an instant email to sign up for half-day trainings either in the morning or the afternoon to work with colleagues while led by the district's professional development department. These half-day trainings are three hours long, either from 9am-12pm or 12:30pm – 3:30pm. The first hour will include site leaders leading a discussion about the concept of Study Skills Integration and the potential they see for using it in their own classroom. The second hour will involve a collaborative hands-on activity. The facilitators will give directions for hour two where learners break into small groups. Each person will introduce their subject matter and discuss a lesson they currently use that could incorporate Study Skills Integration. The group will then decide whose lesson plan they want to brainstorm with. Once decided, group members will devise a new lesson plan with their colleagues that now incorporates the Study Skills Integration they learned from the eLearning module. The first 30 minutes of hour 3 will return to whole group discussion devoted to each group briefly discussing their approach to include Study Skills Integration during their brainstorming session. The collaborative approach to professional development was chosen because schools “characterized by a strong professional community were about four times as likely to see a substantial improvement in students’ reading and math scores than schools that had a weak professional community” (Bryk, 2010).

Hour 3 will be a detailing of the last part of the training for teachers. In this part of ILT, the instructional workforce will be given parameters to apply the training from the eLearning module to an existing lesson plan for administrative observation the following week. After observation is complete, learners will attend one last debriefing training session after school to discuss administrative observations and results based on the rubric. Total time is from the start of the teachers completing the eLearning module to the observation is two weeks, non-continuous. The length lends itself to changing the district's culture by making this a practice that is observable and measured by all managers moving forward.

Lastly, the training will happen in cycles beginning with elementary teachers, then middle school teachers, and end with high school teachers. The training initially will begin only with instructors who teach classes that have high-stakes testing attached to their courses. Should the A-D phases of the evaluation prove effective, it will be rolled out systematically for elective classes and other

courses not attached to high-stakes testing until the district has at least 80% of its instructional workforce who practice Study Skills Integration in their classrooms in the long-term.

Logistics

- The eLearning module will take place on computers at the teacher work site or from a personal computer for those who are working from home
- ILT portion of the training will take place via a preferred video conferencing platform or a meeting room on the campus. This will be decided by administrators

People

The training will involve the following roles and stakeholders:

- Instructional Designer
 - Consult Subject Matter Experts (SMEs)
 - Compose Training Needs Assessment (TNA) and Project Design Brief (PDF)
 - Design curriculum and develop evaluation
- Facilitator (district professional development department/stakeholder)
 - Delivers ILT component to learners
 - Creates material to send to IT department and administrators to notify teachers
- Manager (administrator/stakeholder)
 - Conduct learner observation after the training
 - Report ongoing post-observation findings to the professional development department
- Subject Matter Expert (SME)
 - Supports curriculum design with expertise
 - Explain industry specific knowledge
 - Acts as consultant throughout design process
- Learner (Target Audience)
 - Engage in all learning activities within the training
 - Complete all formative and summative assessments
 - Give evaluative feedback
- Student (Stakeholder)
 - Take student pre- and post- perception surveys

Roles and Stakeholders	Before Intervention	During Intervention	After Intervention
Instructional Designer (ID)	Consults Subject Matter Experts (SMEs), compose Training Needs Assessment (TNA) and Project	Helps administrator and professional development team with the implementation,	Carries out evaluation, collecting data from feedback, derives final report and works with

	Design Brief (PDF), design curriculum and develop evaluation	troubleshooting and clarifying along the way	stakeholders to improve training
Facilitator (district professional development department/stakeholder)	Receives training from ID, creates material to notify teachers, meets with administrators	Delivers ILT portion of training and supports administrators and teachers	Compiles school-based data in the evaluation phase for administrators
Managers (administration/stakeholder)	Notify teachers of training, works with PD department, participates facilitator training	<i>N/A</i>	Sends data to professional development department, leads faculty meetings for 'data chats'
Subject Matter Experts (SMEs)	Explain industry specific knowledge, gives feedback on curriculum design	<i>N/A</i>	Helps determine shortfalls in training with industry knowledge
Learners (Target Audience)	Engage in all learning activities within the training, take pre-survey	Demonstrate acquisition of knowledge, attend all components of the training, complete training requirements	Give evaluative feedback and participate in observations
Students (Stakeholder)	<i>N/A</i>	Take perception surveys	Take perception surveys

Resources

- Handouts
 - Sites where in-person ILT is chosen, learners will receive lesson plan templates for the observation
 - Poster paper for in-person ILT learners to display and share their final product from the breakout groups
- Writing Utensils
 - Sites where in-person ILT is chosen, learners will be writing out their notes and brainstorming activity
- Classroom
 - Individual teacher classrooms will be used for teachers to conduct a lesson that will be observed by their administrators
- Technology
 - Laptop, projector, LMS software, video conferencing software, high-speed internet connection
- Venue

- Chairs, desks, enough space to move into groups

Training Dissemination

The content outline and implementation plan will be how the training is disseminated. The timeline provided falls in line with the regular calendar of the school year to prevent conflicts. For instance, the observations that teachers will undergo by their administrators are aligned with the time of their regular bi-annual teacher observations. Another example of this alignment is with the administrator's submission of monthly lesson plans to the professional development department. Regular intervals of lesson plan collection is common practice in school districts. Lastly, the evaluations based on Level 4 of the Kirkpatrick model is timed with state testing in order to measure if there were gains as a result of implementing Study Skills Integration.

Training Diffusion

This intervention will provide uniformity of the teaching practice in a way that provides cohesiveness and benefits students. Though district pacing guides provide the same topics that teachers should be exploring in each content area, there rarely is an agreed upon methodology of how students should approach their tasks for success. In a study published in 2016, it was found that "metacognition and study skills and habits are associated with ability of learning how to learn [which could] explain why some students who are not doing well in academia are being successful in the non-academic and practical world" (Al-Hilawani, 2016). Diffusion will happen as teachers at various grade-levels take the training and as more teachers are required to include Study Skills Integration into their lesson plans. As this happens, it will become apart of the district's common practice and as a result, students will be guided in how they should process information to have success in their assignments.

Adoption and Buy-In

The goal in adoption and teacher buy-in would be to get a level of commitment rather than compliance (Rothwell et al., 2016). K-12 educators are often inundated with new training, methods, and responsibilities. This can lead to resistance from any school's instructional workforce. To combat this potential resistance, the professional development department should plan their school calendars around centralizing this particular training since it relates to other training. In centralizing the Study Skills Integration training to roll it out universally, it is recommended that the professional department team refashion their other trainings to take less time and be less involved so educators can feel more equipped to complete the components of this training. Educators are experts in instruction and having real opportunities for their input to be considered in their own training would also increase the depth of adoption. It is vital, therefore, that it is communicated how the pre-survey will be used to design training. During the ILT portion, the first hour needs to be a time where teachers can give their honest feedback and discuss their hopes and concerns about implementing Study Skills Integration in their classrooms. The data chats that administrators will have during the evaluation phase must be met with welcoming anecdotal comments of how the training is working. Lastly, it should be emphasized that using this training to better equip students could potentially lead to a less stressful environment as this methodology becomes the norm school-wide so that students are increasingly aware of the expectations and know how to apply successful study habits. As students have this concept integrated into their lessons, it creates an environment that benefits learning for all.

Training Monitoring and Potential Problems

Relying on the internet connection and the overall digital nature of the process could pose problems and delay the onboarding of the training. Having traditional paper models ready to go for prolonged issues would be the solution in that case. Keeping accurate records during the evaluation phase will also need to be monitored. Utilizing support staff for this task will help ensure that the reporting gets done.

Learning Outcome

Instructors will be able to develop lessons that infuse content-based instruction with study skills so that their students not only learn about the subject area, but how to process the information and acquire the knowledge.

Learning Objective

As a result of this training, the instructional staff will be able to add study skills exercises and student self-evaluation checks to the beginning, middle, and end of their lesson by pairing study skills to subject area content.

Neuroscience of Learning

Learning cannot be understood without taking into account the physiological and neurological factors at play. The AGES model was developed to help understand what causes the brain to retain information. It is well-researched that the hippocampus plays a central role in keeping the brain engaged when there is stimuli worth paying attention to. AGES stands for Attention, Generation, Emotion, and Spacing (Pulichino, 2017). Knowing that there is something to be gained at the end of any learning is another way to keep the brain engaged. “Feel-good” chemicals in the brain are released when the learner knows they will be rewarded. All of these functions are directly connected to the level of motivation a learner has. When these neurological realities are planned for in instructional design, there is a guarantee that learners will have a deeper understanding of information. Therefore, it is vital to consider the elements of the AGES model in curriculum design. The ways that AGES are considered in the Study Skills Integration training is as follows:

Attention

There are varying levels of attention. Attention can be “passive and involuntary” or “active and voluntary” (Pulichino, 2017). Furthermore, according to Pulichino, one way to increase attention is to have breaks and minimize distractions. In the eLearning, the modules are broken up into small increments with navigation buttons that help the learner know when they are ready to move on to the next activity. Distractions are minimized by adding slides that aren’t too busy and are uniform in their design as to not take away from the learning itself.

Generation

When learners are put in a position to create something within the learning process, they are able to make greater neural connections. The ability to provide reflection and insight is also a channel through which generation occurs (Pulichino, 2017). In this training, learners will encounter a few choose-your-path simulations between a fictional teacher and student. These scenarios are realistic depictions of what can occur in a classroom. Learners will be met with student dialogue and be asked to choose the right response. The avatars will then respond to the learner choice. This will increase motivation as the learner will want to make the right personal connection as it may reflect how they would respond and perform in real

life. Additionally, learners will be able to participate in generation by the ILT aspect of the training that requires learners to create their own lesson plans.

Emotion

Emotions trigger the hippocampus to increase learning (Pulichino, 2017). The simulations aforementioned have the ability to do this because it involves realistic interactions between a teacher and a student in which the teacher has the responsibility to motivate them with Study Skills Integration. “Applying positive social pressure” is another way to foster emotion for learning retention. The fact the learners will need to share with their peers a lesson that they already teach and infuse Study Skills Integration will motivate learners to complete the training successfully.

Spacing

Studies prove that memory is drastically improved when information is chunked and learning activities are spaced out (Pulichino, 2017). This training has the necessary spacing embedded both in its delivery and roll-out. This is evidence first in the two week period that learners will have to complete the eLearning. The ILT portion is three hours long, but each hour is filled with activities (including time to eat) that are not like the activities that come before it. Lastly, educators have a week to tweak a previous lesson plan before it is observed. Though this training is extensive, timing was kept in mind to not burden the learners, but instead make them feel equipped to complete the training.

Rationale

Teaching study skills is vital to the learning process for K-12 learners. This training enables teachers to explicitly teach study skills that are often lost. This happens “as early as in the fourth grade [when] teachers begin to present many of their lessons in the form of lectures. This type of content delivery requires students to quickly process information” (Skow et al., 2013). Expecting students to complete assignments without ever teaching them the strategies to process the information needed to do the tasks successfully is akin to asking someone to drive without ever teaching them to operate a car or to cook without knowing how to turn on a stove. Study and thinking skills are a foundation for learning. The following chart provides more context into the training content that teachers will be able to apply in their classrooms.

Activities Related to Learning	Study Skills Strategies
Processing information	<ul style="list-style-type: none"> • Graphic organizers • Comprehension strategies
Retaining and recalling information	<ul style="list-style-type: none"> • Mnemonic strategies • Note-taking
Organizing materials and managing time	<ul style="list-style-type: none"> • Time management • Materials organization

Selecting, Monitoring, and Using Strategies	<ul style="list-style-type: none">• Self-regulation strategies
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(Skow et al., 2013)

Rationale (continued)

Many students are taught in a way in which they have to skip a step, in order to succeed in class which leads to frustration both in the student and the teacher. Empowering teachers with Study Skills Integration strategies will serve the interests of multiple stakeholders. The district and school administration has an interest in improved test scores, educators have an interest in both student success and positive job evaluations, and students have an interest in succeeding in their coursework. This training meets the needs of various entities.

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