Design Document

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Project Statement: *Getting SMART*

Currently I am employed by a local school district as an Instructional Technology Resource Teacher (ITRT). This is my second year as an ITRT. I work very closely with teachers to help them create innovative lessons that help to incorporate technology into their lessons. As an ITRT, I am also responsible for creating staff professional development to meet the needs of our teachers. I work collaboratively with 22 other ITRT's within the county to design, develop and implement these learning initiatives as professional development sessions for teachers. These professional learning opportunities address teachers' technology and learning needs that have been identified from a needs assessment. Throughout the years, there is a need to repeat courses due to the busy schedules of teachers, new teachers entering the district, and new technology that is being deployed.

Project Description/Goal Analysis

A local school district has 33 schools (elementary, middle, high and alternative education), employs over 1,500 teachers and serves approximately 23,840 students (Source not listed to protect district). Every classroom in the county contains a SMART™ Board. The SMART™ Board and SMART™ Technologies allow teachers to bring interactivity and collaboration into the classroom (SMART Technologies, 2013). "A teacher can create engaging lessons that focus on one task, such as a matching activity where students use either their fingers or a pen to match items or integrate multiple items into a lesson plan such as websites, photos, and music that students can interact with,

respond to verbally or even write comments on the board itself" (Teich, 2009, para. 2).

Although, SMART™ Products are easy to use, the technology can often be frightening to older teachers and those who have never used such products before. Many teachers do not have the knowledge, skills or time to learn how to use these products. The school district was spent thousands of dollars to purchase these boards for teachers to use in their classroom. However, after recent classroom observations, it was noted that not many teachers were actively using their SMART™ Board. "A needs assessment is used to identify gaps in performance and then determine if the gap is worth addressing" (Morrison, Ross, & Kemp, 2007, p. 32). Through the needs assessment, it was also determined that the teachers, who did not prominently use their SMART™ Boards, were not technology savvy and showed a fear of failure when using this kind of technology in front of students. In order to adequately address the current need of the district the recommendation is to provide a training program that will provide instruction for teachers on how to use the SMART™ Board and understand how to effectively create interactive lessons that are engaging for students.

Getting SMART is a two hour professional development session that is delivered in a face-to-face learning environment. The group size will be capped to a maximum of 20 learners per session. The face-to-face setting allows for the needs of learners to be addressed personally since many of these learners are not tech savvy teachers. This setting also allows me to provide these learners

with personal interaction and instantaneous feedback when questions arise. According to Morrison, et al., "group presentations the instructor tells, shows, demonstrates, dramatizes or otherwise disseminates subject content to a group of learners" (2011, p. 220). By presenting in a group setting this allows for the learners to be in a familiar instructional setting, more learners to be addressed at once and flexible learning needs can dictate the presentation and be tailored to the needs of the learners during instruction (Morrison, et al., 2011).

A goal analysis can be described as "a method for defining the undefinable" (Morrison, et al., 2011, p. 41). The goal analysis can also use the data from the needs assessment to help set priorities in a project (Morrison, et al., 2011, p. 41). The needs assessment that was conducted for this project has identified the following goals:

1. Participants will know and understand how to connect their SMART Board to a computer and project for classroom use. *(Most Important)*
2. Participants will understand the tools and how to implement the different tools into a lesson. *(Very Important)*
3. Participants will be able to create or modify Smart Board lessons that correspond to their curriculum to enhance students' learning and motivation. *(Moderately Important)*

Learner Analysis

"To serve either a training group or an academic classroom, the instructional designer must obtain information about the capabilities, needs, and interests of the learners" (Morrison et al, 2011, p. 56). Identifying the

needs and interests of the learners is essential to the "planning, entry point, selection of topics, and sequencing of information" (Morrison, et al., 2011, p. 56). This district employs teachers from the age of 22 to retirement age. Their teaching experiences vary from first year teachers to a thirty-year veteran. The education levels of these participants range from a bachelors degree to doctorate degrees. Just as other careers, these teachers must meet the Virginia Teaching Standards and have obtained the following in order to hold a valid license; have attended a four year institution and obtained a bachelors degree, passed required Praxis I and II tests for teaching field, and be employed by a Virginia school division. Students participating in this course will have basic computer knowledge such as how to turn on and off the computer, use email and word publishing documents, understand how to save and retrieve files. However, no interested learner will be turned away. It is expected that these learners will have varied learning styles, but will mostly prefer a hands-on and face-to-face learning method. This particular learning environment will allow for the instructor to provide individual assistance to each learner during the training.

Learners who prefer a face-to-face learning environment often learn from experiences and situations (Ormond, Shunk, & Gredler, 2008). These learners also benefit from social interaction in which they create meaning through interacting with other individuals within a course (Kim, 2001). An advantage of using the traditional classroom setting is that this environment allows students to socially interact as they do within the natural world.

These learners will have varied learning styles that can be broken into four main categories; auditory, kinesthetic, visual and tactual. The course instruction and delivery methods will be varied in such as way that will address each of these learning styles to best suit the needs of the learners. However, according to Malcolm Knowles andragogy learning theory, adult learners tend to be more successful in learning environments that are tailored to meet their individual needs (Conlan, Grabowski, & Smith, 2003). Most adult learners are goal oriented, self directed, most interested in learning about subjects that have an immediate impact to their job/personal life, and enjoy problem-centered learning (Conlan, Grabowski, & Smith, 2003). It is important that the adult learner know their time is valued and they understand how to immediately apply the knowledge (Ormrod, Schunk, & Gredler, 2009).

Contextual Analysis

There are many advantages of using a traditional classroom setting for a training environment such as the social interaction with peers and instructors, access to facilities and technology, it aids in motivation and addresses time management discipline, and helps to foster new relationships between peers more easily (Wenzel, 2007). Most importantly, in a traditional classroom setting, one benefit is that social interaction can take place in forms such as peer tutoring, cooperative learning, and face to face discussions.

However, within the instructional context there are influences that affect every aspect of the learning experience" (Morrison, et al., 2011, p. 65). These influences can include distractions from other classrooms, students,

technology, seating, lighting, room temperature, etc. By conducting a context analysis the instructional designer ensures the instruction fits the instructional environment (Morrison, et al., 2011). There are three types of context that an instructional designer should review when planning a course; orienting context (learner), instructional context (learning environment) and transfer context (application of knowledge).

Orienting context focuses on the skills that each of the learners brings to the course. The *Getting SMART* students will be eager to learn new skills to implement in their classrooms. These learners have the ability to sign up for *Getting SMART* on My Learning Plan (the district's LMS for professional learning). The learners are intrinsically motivated to attend this professional learning session because they want to learn how to use the SMART Board and how to create interactive lessons to increase student learning and engagement. This course is not a mandated course and does not require that all teachers participate.

Getting SMART course will be held in a face-to-face session at a local middle school inside a computer lab. The instructional context of the classroom will contain two SMART™ Boards (both for better viewing while working independently), two projectors and computers for each student. Within this classroom there are no windows to view outside; this will help to decrease distractions within the classroom. The session takes place after school hours so there should be minimal classroom distractions. The school is typically on

the colder side, so each participant will be emailed to bring a sweatshirt or light jacket to the course for comfort.

The two-hour learning session will go very quickly. Some learners will want to take lots of notes. It will be encouraged that they "play" with the software. All instructional materials, SMART™ Board lessons and handouts will be available on the learning management system for future reference. Since learners are being engaged in a hands-on experience they are more likely to apply their newly learned knowledge and skills within the classroom (Morrison, et al., 2011). Within the session the instructor will ask interactive questions that require learners to reflect on their own classroom and explain how they could use the tool in their context.

Task Analysis

The students participating in this course have little or no knowledge of the uses of the SMART™ Board. These learners will acquire basic skills to confidently maneuver through a SMART™ lesson. Students will learn the essential tools that are used to create interactive features in a lesson. Students will also have the time and support to create their own interactive SMART™ Notebook lesson. As the instructor of this lesson, the materials will be organized in the learning management system and all students will be enrolled into the group. This will allow the users to have access to all of the handouts and presentation files during and after the presentation.

We will begin with some hands-on learning of how to connect their SMART™ Board to their computer and projector. Students will also have a

reference file for future reference. Then students will use the presentation file that is organized in such a way that it will not overwhelm the student while practicing the tasks. Finally, we will end with having students register with SMART™ exchange. SMART™ Exchange allows educators to post SMART™ Notebook lessons. These lessons can be downloaded and edited by other teachers. At the conclusion of the course there will be some built in time for participants to begin a lesson that encourages students to interact with the board. (See in Appendix, visual 2 for course flow outline).

Instructional Objectives

Instructional objectives help to identify exactly what the learner will know upon completion of instruction. These objectives help the instructional designer create a highly focused unit of instruction and have a framework for evaluating student learning (Morrison, et al., 2011). The instructional objectives for *Getting SMART* are:

1. Learn how to hook up and orient your Smart Board (Psychomotor Domain).
    a. (Mixed Domain) After watching the instructor connect the SMART™ Board, computer and projector, the student will be able to make the connection with 100% accuracy in 3 out of 5 attempts.
2. Learn the ins and outs of SMART™ Notebook software (Cognitive Domain).

a. (Cognitive Domain) Students will be able to identify and describe the SMART™ Notebook tools and uses for the tools with 90% accuracy.

b. (Cognitive Domain) Students will be able to identify and describe the function of the sidebar tools with 90% accuracy.

3. Create effective Smart Board lessons that correspond to your curriculum and enhance students' learning and motivation (Mixed Domain).

a. (Psychomotor Domain) Students will be able to register and search the SMART™ Exchange website with 100% accuracy.

b. (Mixed Domain) Students will be able to begin to design and develop their own SMART™ Notebook lesson with 80% accuracy.

Instructional Sequencing & Strategies

"A well designed instructional strategy prompts or motivates a learner to actively make these connections between what the learner already knows and the new information" (Morrison, et al., 2011, p. 150). The design should activate the existing knowledge and then help the learner to transfer the new knowledge (Morrison, et al., 2011). It is important when sequencing instruction that the prior knowledge of the learner is taken into consideration. In order to determine the appropriate sequencing the instructional designer must identify skills that are dependent upon one another (Morrison, et al, 2011). The selected sequencing is the prerequisite method. This strategy allows the learner to build dependent skills upon one another (Morrison, et al., 2011). First, the

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learner will be instructed on how to connect their SMART™ Board to the computer and projector. Next, the learner will navigate through the tools within the SMART™ Notebook Software. Within the presentation file, students will manipulate each tool within the file in order learn the uses of the tools. Students will then be directed toward the side bar tools. These tools will allow the users to create unique backgrounds, find interactive multimedia and add attachments to the pages. Students will then find the SMART™ Exchange link within the side bar and register themselves on SMART™. Then, users can search for a lesson to manipulate or use within their course. Lastly, students can begin building their own SMART™ Notebook lesson.

The sequencing steps and corresponding instructional objectives for *Getting SMART* instructional module are as follows:

Table 1.2: Sequence of instructional tasks for Getting SMART instructional module

Sequence	Description	Objective
1	Learn how to connect SMART™ Board	1.A
2	Learn how to use tools and side bar tools	2.A and 2.B
3	Learn how to search SMART™ Exchange and Create Notebook Lesson	3.A and 3.B

The instructional design strategy for *Getting SMART* instructional module is as follows:

Objectives 1A: The student will learn how to connect the SMART™ Board to a computer and projector. The learner will be able to complete this task by the end of the course (Procedure/Organization, Practice).

Initial Presentation: Learners will learn with the presented information, and then complete each step in a hands-on approach.

Generative Strategy: Learners are encouraged to complete each step and ask questions throughout.

<u>Objectives 2A and 2B:</u> The student will learn the navigational tools and side bar tools in the SMART™ Notebook Software. The learner will use the software and presentation template to follow along and click and play throughout the presentation (Procedure, Practice).

Initial Presentation: Learners will learn with the presented information, and then complete each step in a hands-on approach.

Generative Strategy: Learners are encouraged to complete each step and ask questions throughout.

<u>Objectives 3A and 3B:</u> The student will use SMART™ Exchange to find a lesson that correlates to their curriculum and the student will begin a new SMART™ Notebook lesson (Procedure, Practice, and Elaboration).

Initial Presentation: Learners will learn with the presented information, and then complete each step in a hands-on approach.
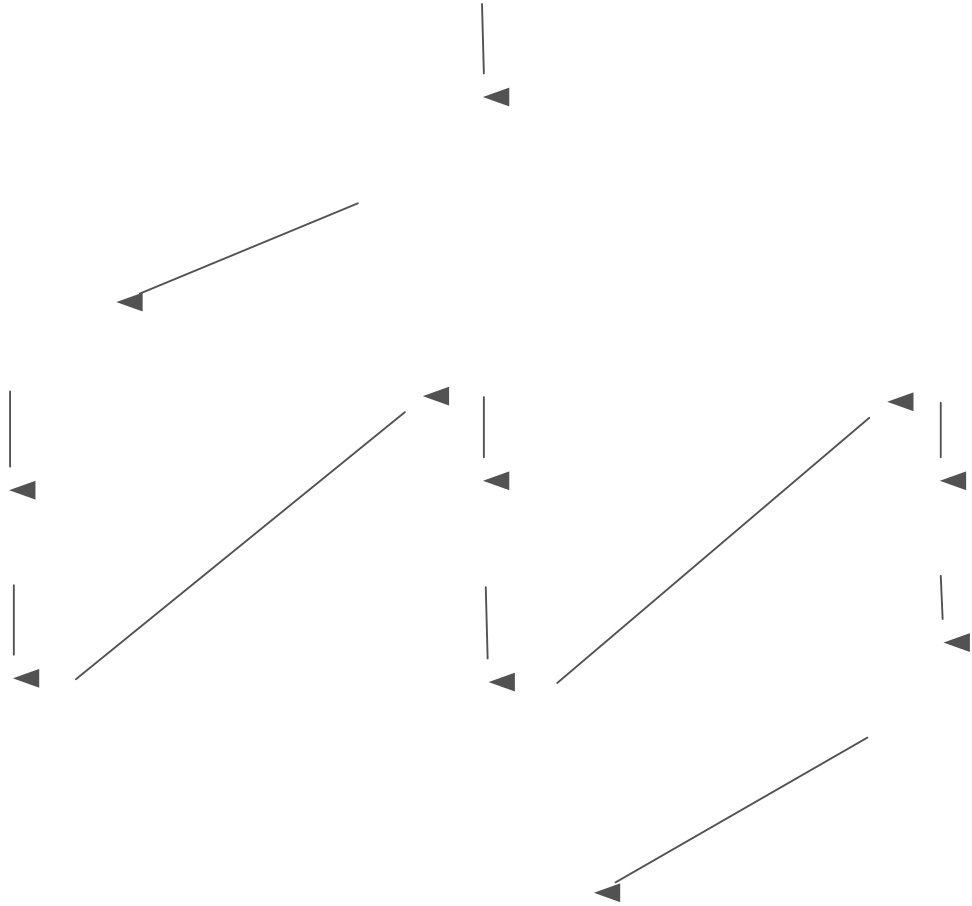
Generative Strategy: Learners are encouraged to complete each step and ask questions throughout.

Visual 1: This image shows the characteristics of the possible learners that may take the *Getting SMART* instructional course.
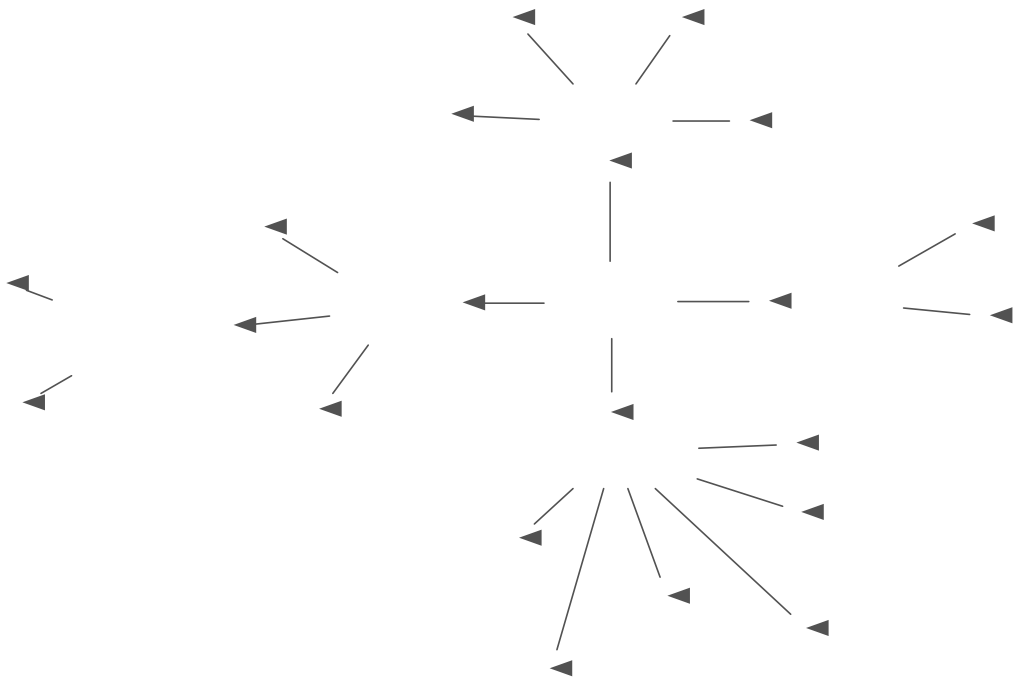
Visual 2: Image shows the flow of the *Getting SMART* course. This is an overview of how the outline of the course will flow.

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