

Learner Analysis

The target population for this learning program is comprised of teachers at Overton Public School who currently have a SMART Board interactive display or are interested in getting one in the future. A detailed analysis of these learners will ensure that the instruction is informed by their prior knowledge, responsive to their learning styles, and relevant to their practice.

Entry skills	As revealed in the goal and task analysis, there are a number of entry skills required for the instructional goal that was identified. In this case, and generally throughout the learning program, entry skills fall into two categories: 1. Basic computer literacy (e.g., turning on a computer, operating a device, entering text, using common software programs, etc.) 2. Basic instructional techniques (e.g., a mastery of the content area, defining components of a lesson, selecting learning materials for an objective, creating valid and reliable assessments, etc.) Each of these categories requires its own complex set of intellectual skills, but they are skills which should reasonably have been attained by a professional educator. This learning program will teach learners how to use a tool (building on their computer literacy skills) and how to create lesson content that fits their instructional style (building on their instructional techniques). At the start of the learning program, assessments will be given to ensure that learners have the requisite entry skills and that a shared vocabulary may be established.
Prior knowledge of the topic	All of the learners in this program have had some level of experience with an older model of SMART Board than they will be learning about. With these old boards, some teachers have designed interactive lessons while others have only used the board as a touch-input device for their computer. Still other teachers have only ever projected their screen onto the board and do not understand how to achieve touch controls or get the pens to work. They have no experience with the new SMART Boards, and some have expressed misconceptions about whether touch controls can be achieved wirelessly or exactly what features will be available. Regarding the online interactive lesson creation, some teachers have experience creating similar lessons through the SMART Notebook application.
Attitudes toward content and potential delivery system	Learners' attitudes about the content to be learned range from eager, excited, and relieved, to simply open-minded and willing. All of the learners understand that the value of the device lies in their ability and willingness to make use of the features. After seeing demonstrations of successful use of the SMART Board, they began to see that time spent learning more would be immediately relevant to their instruction. The potential delivery system for this instructional program could be a video of

	a screen-share with verbal instructions and visual examples. Learners would benefit this type of instruction for three reasons: 1. It shows how to complete tasks from the perspective of the teacher. 2. It clearly demonstrates step-by-step what teachers need to do. 3. It can be re-watched and paused as needed. However, the learners also value in-person and collaborative learning experiences, so the program could also be delivered in that way.
Academic motivation	The learners are motivated to engage in this instructional program because many of them felt like they did not receive adequate training when they first received a SMART Board, and some felt guilty about not being able to use that device to its full potential. As more technology has been introduced (e.g., 1:1 iPads and digital curricula), these learners have developed some self-efficacy around integrating technology with their instruction, and a new SMART Board represents a second chance at using an interactive display tool to engage their students in learning.
Educational and ability levels	Learners in this program are fairly homogenous when it comes to their entry skills and general teaching abilities, but they are quite heterogenous when analyzed from the following perspectives: 1. Comfort with using technology and their own self-efficacy 2. Degree to which technology is a part of their daily instruction 3. Primary ways in which the SMART Board will be used
General learning preferences	In a 2021 survey, teachers in this learning program indicated overwhelmingly that they preferred to learn via in-person, collaborative experiences or self-teaching and independent study. They also preferred to learn directly from a peer/colleague instead of a content expert whom they did not know.
Attitudes toward the organization giving instruction	As indicated by school improvement perceptual data, teacher morale at this school is generally high, and teachers feel positively about their interactions with administrators, colleagues, students, and parents. They believe that the school provides them with relevant professional development by qualified individuals, and that the school's technology programs are sufficient at meeting their needs and the needs of their students. Teachers feel that administrators have a growth mindset for staff and students, and provide them with the freedom to experiment, collaborate, and ask for help.
Group characteristics	The learner group consists of 22 female and 8 male teachers, all with a combined average of 11.5 years of experience. The individuals are all White, with most being from the central Nebraska region. The greatest diversity exists in the content area that is the individual's expertise: among 30 teachers, there are 23 separate content areas. This will affect the lens through which they will view any instruction and judge its relevance, as well as the context in which they will be implementing their new skills.

Performance Context Analysis

The knowledge and skills of this learning program could be performed in a few different contexts, depending on the instructional goal in question:

1. A physical classroom, leading instructional activities with students.
2. A virtual classroom, leading instructional activities with students.
3. An empty classroom, office, or home setting, developing and designing instructional activities for students.

Assuming that the majority of skills will be performed in a physical classroom, leading instructional activities with students, an analysis of the facilities, resources, and limitations of this environment will aid in designing compatible instruction.

The classrooms in question are all equipped with adequate lighting, furniture, climate controls, and high-speed WiFi. Each will have a new SMART Board interactive display as well as an Apple TV and stereo sound system. The teacher is provided with a laptop computer and an iPad, and the students they encounter will also be equipped with an iPad. All student and teacher devices are less than four years old. Using these devices, teachers and students have access to a number of software resources including the Lumio lesson platform that will allow teachers to design and deliver a lesson while students receive and interact with the lesson. For the goals of this instructional program to be met, this performance context will be limited by things such as electrical power, network availability, device operability, and timing of the class period and school day.

In the needs assessment, it was identified that the replacement of many older SMART Boards with new ones was a form of administrative mandate. It was also discovered that teachers did not receive adequate instruction in order to make the best use of the first round of SMART Boards that arrived, wasting thousands of dollars in software licensing over five years and

potentially even the hardware purchase itself. With new devices and limited staff proficiency, an instructional need was clearly identified. Administrators at the school noticed this as well, and are prepared to support teachers, indicating that, “We can’t forget about professional development when we are purchasing devices,” and, “We have to make sure that our teachers know how to use our technology and are using our technology.” The principal and superintendent have worked with the Board of Education for several years to develop professional development policies that maximize growth, such as:

1. No limit on the amount of professional leave taken
2. Paying all costs associated with professional development
3. Providing sufficient staff inservice time for relevant professional development
4. Bringing in experts or sending staff to “train the trainer” events
5. Requiring modest professional growth evidence from all teachers
6. Supporting mentoring relationships and PLCs among teachers
7. Staff evaluations include measurement of professional growth activities

Since my tenure at the school began, I am fortunate to have fostered a culture where teachers have become more confident airing their concerns and apprehensions about teaching with technology. Discussions are had openly wherein there are no “stupid questions” and teachers feel listened to and respected, and I have a knack for working well with teachers wherever they are in their technology integration journey. When one teacher succeeds with a technology project, others get ideas and ask for support. As such, the social aspects of the performance context are strong and encouraging, with many options for learning alone, with others, or with a coach.

Learning Context Analysis

The learning environment for this instructional program is very closely aligned to the performance environment. For those instructional goals that may be performed by the teacher,

alone on a laptop (such as designing and developing a lesson on the Lumio platform), the instructional environment may be a video detailing the step-by-step procedure for logging in to the site and adding content. For the lesson delivery and student interactivity instructional goals, the instruction will be delivered live and in-person in the school's library. This room has a SMART Board interactive display that is identical to the models that teachers will be using in their own classrooms, and teachers will use their own iPads to follow along with the instruction just as students would. The instruction will be a literal simulation of what a lesson led with the SMART Board would be like, as I talk my way through the flow of a lesson and the tasks that the teacher needs to complete along the way.

The school has provided me with leeway in terms of the delivery approaches I desire for professional development, but fortunately, any of the instructional goals can be achieved by instruction in a variety of settings, whether in person in the library, one-on-one in a teacher's classroom with their own device, online with live participants, or online in a pre-recorded video.

Given that the instructional goals are versatile in their delivery methods – because the SMART Board itself and the Lumio software platform have been designed for maximum versatility, including K-12 distance learning – there are few constraints from the learning site that would affect how the instruction would be designed or delivered. Obviously, for portions of the instruction that would take place virtually, it would take some specific effort to design the best learning experience in that setting and this would not apply to a live and in-person session. For example, video production software would need to be leveraged to switch between different device screens when demonstrating a lesson, and I would need physical access to a SMART Board to demonstrate its hardware features via video. In-person instruction would require planning for participants to have devices to connect to the lesson, and time for individuals to inspect and use the board at a closer proximity.