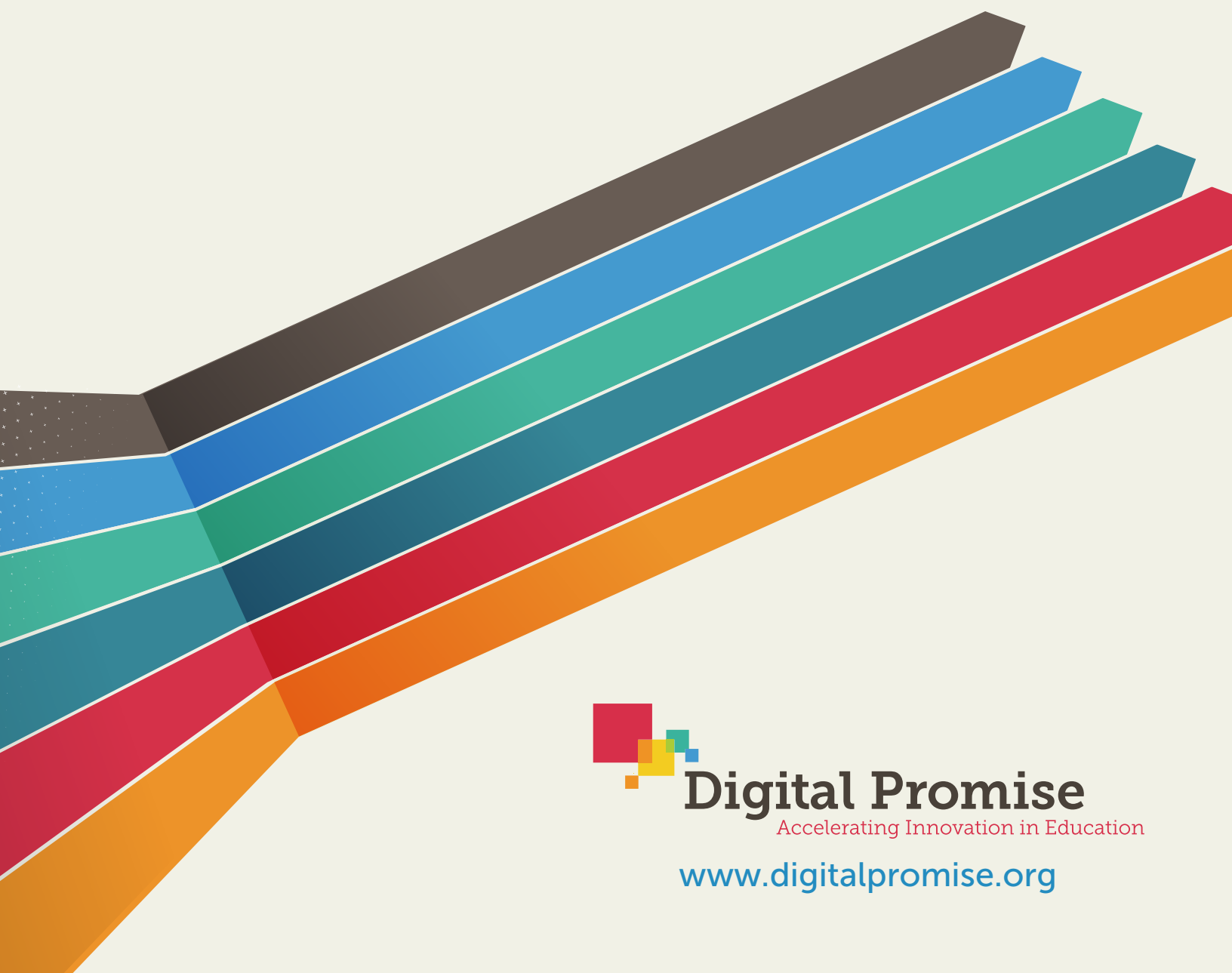Technology and Family Literacy Case Study:

SPICE Family Literacy Program, Central Maine

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The [Students and Parents In Cooperative Education (SPICE) Family Literacy Program](#) serves central Maine's Regional School Unit #3 (RSU 3). SPICE's mission is to integrate childhood and adult education. "Birth to three is so underserved, and that's the time that children learn the most," says Pat Hughes, RSU 3 Career, Adult, and Community Education Director. "You can do a whole bunch with your kids very young, and you're giving a parent the confidence that he can help his child be a better student."

RSU 3 spreads across 440 square miles. Over this vast distance, there is no one town where people gather. So SPICE educators went straight to their adult learners' homes.

The Start of the Journey: Assessing Learner Needs

A 2008 state audit reported that parents felt SPICE provided them and their families an excellent education. However, one unmet need was mentioned again and again: SPICE's adult learners were lonely.

SPICE was meeting all of their learners' needs except one: rural isolation. The Adult Education State Director asked Hughes what SPICE was going to do to address this need. Hughes laughed as she recalled the conversation: "Really, he was asking me to solve rural isolation."

Enter the power of virtual technology.

> "This is not distance learning. This is human-supported learning because it is virtual."

Technology as a Community

A 2009 Department of Education [analysis](#) of online learning found that adult learners achieve the best learning outcomes in a blended environment of online and face-to-face learning (versus only online or only face-to-face). The anytime, anywhere capabilities of online learning fit best with adults' many life commitments, while [support from teachers is critical for them to believe they can be successful.](#)

The rural, decentralized nature of RSU 3 made traditional blended learning very difficult, if not impossible. The question Hughes knew SPICE needed to answer was, "Since right now we bring SPICE to our learners, how can we connect them to others without needing them to come to us?"

Her answer: Do it virtually.

A virtual learning center is different than distance or online learning. Hughes emphasizes, "This is not distance learning. This is human-supported learning because it is virtual."

In the [RSU 3 Virtual Learning Center](#), every avatar has a real person behind it. Learners can interact with other learners and their teachers in real time. Teachers are trained to

stop at every avatar in the Center to interact to ensure each learner experiences the human connection that a virtual world provides.

In 2008, SPICE was already using technology in innovative ways. They incorporated pre-made courses, such as Plato courseware by Edmentum Assessments, into their programs, and they provided laptops to their learners. (A note: SPICE now also provides mobile hotspots to learners who do not have their own wifi access.) Their IT department was willing to take on this new virtual world challenge, a critical part of SPICE's success, according to Hughes.

The IT department partnered with Reaction Grid, a software development company specializing in virtual world projects, to create the first level in the Center. From there, the IT department took over the development and has grown the Center to four levels, including a HiSET prep class, a family literacy classroom offering the early childhood curriculum, and community college classes.

The RSU 3 Virtual Learning Center

The Center, which is solely for adult learners, supports SPICE's mission to teach parents the skills they need so they can teach their children. Through the Center's human-supported, flexible learning environment, SPICE instills confidence in the adults that they can and should be "the first teachers in their children's life," according to Hughes.

> "Not only was it a great learning experience, but I think I made a few friends ... So thanks millions, I'm forever grateful!"

SPICE's learners love the Center. They enjoy being able to go in and talk to teachers and classmates. They see the avatars as who they are: real people. They no longer feel isolated even though they are still in their homes far away from other learners in the physical world. As Sylvia Moody, a SPICE student, said, "Not only was it a great learning experience, but I think I made a few friends ... So thanks millions, I'm forever grateful!"

Another SPICE learner, Andrew Johnson, also described how fun the Center can be, explaining, "I don't really like schoolwork, but [the Center] makes it more fun because it reminds me of playing a video game. Whenever I need a break, I can walk around and jump off the roof." Many SPICE learners are ones for whom traditional school was not successful. SPICE knows they need to get these learners interested in and enjoying the learning process again, and coming back to the physical school building is not always the answer.

Hughes admitted that the overwhelming success of the Center surprised even them: "People could not believe that adults were actually spending time in the Center without doing classwork." Since the Center went live in 2012, SPICE has seen an increase of more than 1,000 percent in learner hours, and an increase of more than 254 percent in the number of students served.

Deepening the Virtual Impact

As the Center has continued to grow, SPICE has sought even more ways to maximize the educational power of virtual learning.

In what may be counterintuitive for those not experienced with virtual technology, the Center often allows for more human support than traditional face-to-face classrooms. SPICE educators have worked to use the Center to alleviate attendance issues. Being virtual, the Center allows for anytime, anywhere learning. As a result, learners are no longer penalized if a life commitment gets in the way – a child gets sick or they are called into work. Instead, they can do the work at a later time, still with the human support of the avatars in the Center with them.

SPICE is also constantly developing the Center's back-end and its capabilities to track learners' application of skills, a critical step in developing learners' confidence to teach their children. Hughes notes that this is something SPICE is only able to do because of technology.

SPICE has created multiple ways to track this transfer. One method tests the transfer of digital skills with a "Do Not Enter" room. When students are first in the Center as their avatars, they learn how to digitally teleport as a faster way of moving. A "Do Not Enter" room then randomly appears as the students' avatars start to walk around. When the avatars come across this room, their choices are recorded as evidence of skill transfer or lack thereof. If they don't enter, they show they can follow instructions. If they do enter (which Hughes admitted is what they usually do!), there is

no way to leave except to teleport or to log out. If they teleport, they have successfully transferred knowledge to a new situation.

Key Takeaways

SPICE is leading the way in transforming family literacy for rural populations. As Hughes put it, "When the limitations of conventional education are removed, the possibilities of what can be learned and achieved become limitless."

SPICE's journey highlights six aspects to consider when thinking about how technology can transform family literacy programs:

- **A virtual world provides real community** and is a powerful antidote to the pervasive problem of rural isolation. Hughes recognizes, though, that family literacy programs in less rural areas might not have the same success with a virtual world if their learners have a physical place to meet. So it is critical to understand what your learners need.

- **A virtual world provides human connection** and, therefore, the critical human support adult learners need that is missing in traditional distance education. In fact, the multiple digital channels for human support can provide more learner-educator connections than face-to-face programs.

- **A virtual world reshapes the process of learning**, providing a new form of learning for those who have dropped out of the traditional school model.

"When the limitations of conventional education are removed, the possibilities of what can be learned and achieved become limitless."

- **A virtual world can hold infinite "buildings."** The many aspects of family literacy programs (parent support classes, high school completion coursework, social support services, etc.) that are often housed in different physical locations can be integrated in a virtual world without the costs associated with sharing a physical space.

- **Use technology to track application of skills.** The technology in the back-end of a virtual learning center can track learners' application of skills in creative ways, allowing for a more individualized approach with learners.

- **Address technology reluctance *in your staff*.** Hughes said the hardest thing they had to address is the staff's (and she includes herself in this) approach to technology. Family literacy programs, and adult learning programs overall, understandably worry about their learners' confidence with and skills in technology.

However, Hughes said the critical step is to work with educators to stress that they cannot shy away from technology because digital literacy is so critical to their learners' path to greater opportunities. SPICE focuses on empowerment through technology skills, stressing that issues are usually the user's not the technology's fault, which in turn means the user can fix the issue or find a work-around. SPICE asks its teachers to practice this mindset every day so they can model for their learners what to do when technology does not work. In this way, educators support their learners in developing confidence and empowerment through digital literacy.