ITLP Case Study
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Introduction

Dianis (2004) and Kachel, Henry, & Keller (2005, p. 14) research show a 40% increase for online learning in high schools in 2002/2003, of which 58 percent were rural schools using the online courses to complement and supplement their courses. Furthermore, Rice (2006, p.429) states, "virtual schools may present the only option for districts that lack the resources necessary to meet the school choice requirements of NCLB with traditional brick and mortar classrooms (Hassel & Terrell, 2004)." Hence the design and goal of Alaska's Learning Network is to provide support, resources, courses and highly qualified distance teachers to all of Alaska, because it consists of the largest collection of rural schools in the United States. Such a large task requires an extensive support system to be sure students are having their individual needs met at a distance. This unique support system also requires an entry-level orientation for both teachers and students to help adequately prepare them to best utilize the online network and get the most out of online learning with highly qualified distance educators. Therefore, at the core of the orientation there should be basic ICT (Instructional Computer Training) for students and teachers focused around building troubleshooting skills, basic Internet safety, communication etiquette and copyright policies. Furthermore, such orientation addresses CIPA (Child Internet Protection Act) and other policies issued around NCLB. "Section 215 is most relevant to schools and requires them, as part of their Internet safety policy, to educate minors about appropriate online behavior. This includes how to interact with others on social networking websites and in chat rooms as well as cyber-bullying awareness and response" (CoSN, 2010, What are the key federal laws affecting Internet access, safety and, social networking in schools?). In short this paper will examine and show that "negative outcomes of online learning environments such as high drop-out rates (Muirhead, 2000) and minimal social interaction among peers (Muilenburg & Berge, 2005) can be overcome with the help of various student support services" (M. Kucuk et all, p. 42) as well as for addressing required policies for the state of Alaska through effective and ineffective findings of the implementation of a blended Individualized Technology Learning Plan (ITLP) professional development online course.

Research

To begin with, it is critical to examine the research surrounding what works and does not work in distance education. Proponents and opponents of distance education have been arguing for many years about the effectiveness of distance education. In fact, Rice (2006, p. 438) states, "K–12 virtual schools and programs have relatively high dropout and failure rates; as much as 50% in some cases (Carr, 2000; Roblyer & Elbaum, 2000; Simpson, 2004)." Furthermore much research shows that dropout reasons are often similar between adults and k-12 students.

> "Frankola (2001), Willgin and Johnson (2004), Bocchi, Eastman, and Swift (2004) and Santaovec (2004) all found that factors with most influence on decisions to drop out of distance courses had to do with "issues of isolation, disconnectedness, and technological problems" (Frankola, 2001, p. 53). They believed that, if course environments were designed to increase facilitation, communication, and feelings of connectedness to a learning community, dropout rate would decrease. However, in light of the fact that so many students are successful in the same courses in which others drop out, it seems likely that some students require even more facilitation and monitoring than others in virtual courses. (Roblyer & Davis 2008, p. 2)

In fact Rice (2006, p. 432) again states, "The undeniable fact is that some students succeed in the virtual educational environment and some fail just as they do in traditional classroom environments."

Roblyer (2006, p. 33) has identified several additional reasons associated for the success of such programs, which include: missing or ineffective program criteria, such as web-trained teachers, systematically designed high quality and interactive content that allows for critical thinking, lack of technical assistance, and lack of mentoring or assessments; the sheer fact of enrolling high percentage of at-risk students that are much more likely to have high dropout and failure rates; and the issue of when and how data is collected to determine drop-our rates which is "more complicated and reflects the challenge of creating effective learning environments, virtual or other- wise." Furthermore research done by Irvin, Hannum & Varre (2010, p. 87) of barriers in distance education for rural schools show that issues were most associated with, "not being needed for curriculum requirements, not having sufficient funding, and not being a district priority were three of the most common barriers reported overall. Our results indicated that logistical barriers were the next most frequent type of barriers in rural

schools. In particular, scheduling problems was the third most often cited barrier."
Kucuk et all (2005, p.15) concur with similar citing research that shows that, "problems
in social dynamics were also recognized as a key barrier for effective asynchronous
discussion in online courses (Wegerif, 1998)". Finally, "A. Bishop and Sue Rimmer
show that online learners overwhelmingly respond negatively to didactically-based
teaching techniques" (Sieber, 2005. p. 329).

So what does work in distance education? Many public opinions include the
misconception that technology tools are what motivate student's success. However,
Bekele's (2010, p.125) research showed that contents, methods and support services were
crucial, and were required for success. Furthermore, "previous research revealed that the
level of student-teacher interaction is the most significant contributor to learning
(Fredericksen, Pickett, Shea, Pelz, & Swan, 2000) and also one of the quality criteria for
effective and efficient online teaching (Swan & Shih, 2005)" (M. Kucuk et all, p. 41).
Kucuk et all (2010, p.41) also points out that, "Among all factors that could affect the
level of learning in online environments, learner participation is recognized as one of the
key elements and a serious success factor (Gunawardena, 1995; Novitzki, 2005;
Thompson & Savenye, 2007; Weaver, 2008)." Finally, Kucuk et all (2010, p. 49) states,
"peer interactions were highly valued by students. Students emphasized that they were
satisfied with responses from peers as much as instructors' support." Hence, many
studies have revealed that "students have a real need to make connections with their
instructor and their peers and research consistently supports the concept that faculty-to-
student and student to-student interactions are important components in student
satisfaction and student retention (Downs & Moller, 1999; Kuh & Hu, 2001; Muirhead,
2001; Picciano, 2002; Stein, Wanstreet, Calvin, Overtoom, & Wheaton, 2005; Stith &
Fitz, 1994)" (Rice 2006. p. 438). Dessoff (2009, p.46) supports this by identifying said
key components in successful programs, in which "students can call teachers from 8 a.m.
to 8 p.m. every day, and there are scheduled monthly phone conversations between
teachers, students and their parents. In addition to providing online assessments of
student success, teachers conduct "discussion-based assessments" by phone during
courses."

In addition to high levels of interaction between student and teacher, and peer to peer, is the need for support services. "Student support services play a key role in distinguishing well-designed programmes from ineffective ones. Building up a successful online learner support programme, all units of an institution and staff need to become involved into development and delivery course of action.)" (M. Kucuk et all, p. 54). Thus teachers need to be prepared to provide such interaction and support services. Roblyer (2006, p.34) suggests the following: preparing students for success with checklists, self-tests and no-credit orientation programs, preparing the teachers for success through training, practice and shared mentor support through the first course, and the use of interactive and flexible course design allowing for project-based group activities, as well as activities away from the computer. In addition, monitoring and supporting teachers to help provide support to students can be seen as part of the support system in meeting the expectations of the course as well as helping to monitor student participation. And finally, monitoring and supporting individual students, with a focused attention on making sure that the students succeed through phone calls, interviews, and weekly progress reports etc.

Additional, Rice (2006, p.441) states, "The characteristics identified as successful with at-risk students—instructional environments that are self-paced, personalized, utilize diverse instructional methods, and are facilitated by competent, caring adults (Barr & Parrett, 2001)—are the very characteristics that have been lauded in distance education circles." This is also supported by Oliver et all (2009, p. 42), stating, "Most of the expectations may be considered items teachers should strive to include in their online courses universally, including detailed and interactive content, peer-to-peer collaborative activities, and speedy feedback" (Oliver et all 2009. p. 42). Finally, Davis (2010) and Rice (2006, p. 36) report that focusing on the individual allowing for choice and flexibility motivate students and should include such elements as, student choice in project-based learning, a direct connection between strategies and course outcome, interaction with the teacher and classmates, many opportunities for differentiated instruction, use of multi-media only when appropriate or needed, consistency in navigation, and regular student review. "In short, students who experience consistent, positive relationships with their teachers were less likely to drop out. Students who don't

experience these kinds of positive relationships often become disconnected and drop out (Zweig, 2003)" (Rice 2006, p. 439).

Findings

As discussed earlier, a component of Alaska's Learning Network required training or professional development in relation to using web-based materials for teaching and interacting with their students online, providing the teachers with support to eventually becoming online teachers for both blended teaching and full distance education. This concept, initially designed by Ryan Stanley (personal communication, January, 2011), was coined Individualized Technology Learning Plan, in which teachers were presented with a set of basic skills, as well as a set of tools and processes to learn said skills. Utilizing this concept with the above research, the ITLP was shaped into a learning plan, in which teachers were pre-assessed to identify areas lacking in basic technology and then asked to set a goal using one of those weak areas initially presented and completed during a 3-day in-person workshop. In addition, the teachers were asked to also focus their goal on a need in their classroom or administrative environments. In conjunction with supporting this individualized goal, the instructor, myself, then provided at-distance daily support for reaching their individualized goal by providing online lessons for learning the initial basic technology skills. The following paragraphs provide insight on what was effective and ineffective from an ICT perspective.

Effective Components of ITLP

To begin with, initial data from pre-assessments showed that teachers needed basic skills first. Results indicated that

> 94% had access to a phone, email, web-cam and headset for video chatting, with average to low Internet speed. 63% knew how to use a variety of technology tools for communication and basic Internet skills, but an average of 12 out of 30 felt they did not have adequate skills to teach others. Furthermore, 26% showed an expert level of understanding when it came to basic computer skills, such as locating folders or installing applications. General "software-skills" results showed diverse skill levels. Only 25% of teachers utilized some form of technology in their classroom for activity-based learning, 11% for communication, 11% for preparation and another 11% for knowledge transmission (Stanley et all. 2011).

In short, general computer fluency skills were consistently found to be lacking, causing workflow to be slow and inefficient. Providing training and online lessons for initial workflow skills, such as searching on the computer or on the Internet, Internet safety, copyright, and troubleshooting greatly enhanced perceptions of success on ITLP's.

Specifically, reports from ITLP participants through personal feedback and course/ coach evaluations indicated that the following components were effective:

- One on one weekly tutoring and group webinars, which provided the initial training for accessing all other information online.
- 5-minute video lessons for each basic skill in which participants reported being able to watch them repeatedly while completing the task.
- Blog posts with embedded videos, images and links and additional resources for implementing in classroom.
- The ability to access a basic skill when an issue prevented them form progressing forward on their ITLP.
- A collaborative area for posting about tech issues so teachers could provide support to one another.
- Self Reflections and Troubleshooting lessons were extremely effective in helping teachers to see a deeper understanding for the use of technology, allowing the growth of internal self-support skills.
- Initial meeting in person allowed for participants to bond and provide support systems for at distance learning.

Of all these effective components, perhaps the most effective components were the initial in-person workshop to provide training or orientation on the process, and the follow up individualized support. In point of fact, mid course evaluations showed high levels of success based statistics that were reported:

75% of participants feel their learning is impacting their students. 80% percent have completed their ITLP outline, 100% have remained in contact with the coach, and 95% are actively working on their ITLP. And most importantly, they are engaging each other through the Network, sharing experiences and providing mutual support (Stanley, Et all. 2011).

In addition, required creation of a troubleshooting process as opposed to specific solutions to issues helped teachers to be independent problem solvers of their tech problems, as well as becoming a source of support for one another. Finally, in general the sense of having a support system on hand allowed for many teachers to feel successful just knowing that someone was there to support them, whether they were accessed or not.

Ineffective Components of ITLP

Due to the short framework of time allocated for creation and implementation, many components of the online course were not prepared with adequate resources and materials. This resulted in the proverbial, "building the plane while flying it." Though this allowed for flexibility and choice from the cohort, many teachers reported feeling frustrated with inability to located needed materials due to the poor navigation and content scattering of the site resulting from the creation of materials as needed. In addition, an inconsistent lesson template made accessing online lessons disjointed and confusing. Though all in-person webinars were recorded and made available to participants, the recordings, which were 60 minutes long, were too large for watching online and many could not preview nor complete watching them due to bandwidth issues. Thus the inconsistency in the independent online lessons, resulted in an unclear purpose or connection to goals of the ITLP online course support.

In addition, many teachers reported that their needs for their ITLP sometimes did not match the specific goals of their ITLP's. However, many of these issues were able to be presented to the cohort via the ITLP Google Group forum and the Tech Issues page on the private ITLP Course Google site. On this page teachers were able to post individual tech issues, and the cohort of teachers were expected to provide solutions and support for one another. However, many felt the need to have more space for providing support then the small cell space that was provided.

Action Steps for the Future / Conclusion

Findings from the reflection of the ITLP professional development support the research that interactivity and support systems are by far the most critical components of distance education. "While some skills such as technical and software specific skills are easy to learn, other skills, such as facilitating online socialising and community building, can be more challenging. Nonetheless, these skills are essential in order to promote social cohesion that is necessary for meaningful communicative interaction" (Compton 2009, p. 95). This is also supported by, Kucuk et all, p.41) in the findings of his study, "in which students needed more social support rather than technical support in online classes). Thus, "The CTO must participate in the development of policies that clearly enforce

privacy, confidentiality, and copyright law and assign ownership of intellectual property developed with district resources" (CoSN, 2009, Ethics and Policies), as well as clear communication expectations and etiquette for both teachers and students, so both are able to interact and encourage interaction online between and amongst one another.

Furthermore, teachers preparing to use blended online learning or becoming a highly qualified teacher need be aware of their districts Acceptable Use Policies as well as how to train their students in an orientation prior to the use of any content. In short the findings of the examination of the effective and ineffective components of the ITLP course can be applied to the creation of courses for K-12 students. In fact, Rice (2006, p. 440) clearly states, "younger students need to be provided guidance in developing characteristics of successful distance students. Common sense would dictate that this applies to the social domains as well. Enhanced computer-mediated communication tools cannot substitute for well-designed instruction and opportunities to engage in purposeful, interactive learning activities."

Therefore the following are suggestions that can be applied towards the creation of AKLN courses for k-12 students, as well as future ITLP cohorts. These include, "helpdesks, routine instructional support by teaching staff, technical training, user guides, faculty professional development activities, and updates of the technologic tools can enable learners to participate more in online learning environments and in turn have a higher level of achievement" (M. Kucuk et all, p. 42). In addition the creation of a peer support area, similar to one designed by Kachel, Henry, & Keller (2005, p. 14), that they called a, "Student Lounge (aka the Water Cooler or Cyber Café). Here students can peer-mentor each other by asking questions, discussing questions related to course objectives, clarifying assignments, and sharing information." Additionally, Dessoff (2009, p. 48) reported such issues as unable to complete a lab or assignment because it is not understood, the need for differentiated assignment or actually completing a science lab, or the need to read the content not online, but rather in paper form. Thus, a clear path and template to lessons needs to be accessible in a variety of formats (PDF, Video, Audio Podcasts) and including a tour of a clear and concise framework of the course in the initial orientation training that allows for creation of content on the fly when needed by the students would allow for choice and flexibility.

Final additional suggestions for k-12 courses include the use of on-site facilitators. Hannum et all (2008, p. 234) reported, "Facilitators in the room with secondary school students as they work on distance education courses can have a positive impact on the students' persistence in these courses and their completion of the courses. The facilitators do not have to be teachers or familiar with the course content, as they do not have any responsibilities for conveying course content. Rather their role is to help students with their self-management, motivation, and other specific problems that students may encounter. The facilitator can also serve as the eyes and ears for distance education instructors who are not physically present by passing information back to the instructors when students encounter problems and stumble."

In conclusion, all findings and research stress the overall importance of interactivity online and the building of community to allow for the flexibility of projects and success for true learning at a distance. But as Desoff (2009, p.48) states in his article from an interview with Ms. Downing an online educator, "The teacher plays the role of any teacher, explaining concepts and acting as a motivator. There isn't a curriculum around that really imparts knowledge by itself. We know that even in the virtual communities," she asserts. Without the involvement of teachers, she continues, students in credit recovery programs 'would fail yet again.'"

Implications for Future Work

Such research and results suggests the creation of the following components for Alaska's Learning Network Non-Credit Orientation Course: How to use the learning management system where the course is located; how to complete an assignment and locate your feedback on the assignment; how often and how to check your progress; how to locate what is expected in the course, as well as locating any timelines imparted by the teacher; how to troubleshoot and/ or get help when unable to resolve a question or issue on your own; how to participate in the community as part of the peer support system; as well as being aware of conduct; behavior and other online policies; expectations and policies for working on projects with classmates, including copyright, ethics and integrity; knowing how to identify if you are ready and will be successful for completing the online course, including the pre-assessments and creation of a learning plan based on

knowledge and skills of the content area and basic computer/ technology skills and course orientation.

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Additional Resources for suggested Implications for future work and research.
ITLP Cohort I Lessons: http://aklearn.net/cohort1/

ITLP Course Site: https://sites.google.com/a/aklearn.net/itlpcourse/home

http://www.educationplanner.org/education_planner/discovering_article.asp?sponsor=2859&articleName=Learning_Styles_Quiz

Sample policies can be located at Office of Superintendent of Public Instruction Site, Internet Safety Training Programs & Policy/AUP
http://www.k12.wa.us/EdTech/InternetSafety/default.aspx