CHAPTER V: DISCUSSION AND CONCLUSION

This study was conducted to determine the perceived barriers and influencing factors relating to faculty participation in secondary online learning programs. The literature review presented studies that addressed this same topic, but in post secondary institutions. To date, very little has been conducted about secondary online learning programs.

This chapter summarizes the study and key findings related to each of the seven research questions. Findings from this study are also compared with findings from other studies that were reviewed in Chapter II. This chapter concludes with recommendations for school districts, educational administrators, and further research.

The setting for this study was a suburban school district with 8,300 students, 4,000 of whom attend secondary school in the district. In the fall of 1999, the school district offered all secondary teaching staff the opportunity to participate in a district sponsored online learning program. The end goal of this program was to have instructors develop and deliver an online course. Some instructors who participated in the program did teach a course. Others started developing a course but did not instruct one. Those instructors who taught a course are referred to in the study as full participants. Those who completed the training but did not complete a course are referred to as partial participants.

Thirty-six teachers expressed interest and received training for developing and delivering online course instruction. Of the 36, 22 chose to participate in this study and were subsequently interviewed. One individual was selected to participate in a pilot interview, and her data were not included in the reported findings. Nine of the 21 remaining participants developed and delivered an online course to secondary students. Of the nine who delivered a course, five taught a course more than once. Additional demographic information was asked of study participants as part of the interview. There were only two notable demographic differences between full and partial participants. First, all nine full participants had earned masters or doctoral degrees while only 9 of the 12 partial participants earned graduate degrees. Second, of the 21 participants, four were

male and 17 were female. Three of the males completed the program and one did not. Six of the 17 females completed the program and 11 did not. A higher percentage of the male population completed the program in comparison with the percentage of females. Information learned from participants did not indicate any potential reasons for the difference in a larger percentage of males completing the program.

These two differences were the only significant descriptive differences between the two groups. Otherwise, a balance of years of teaching experience, academic subject areas, and experiences in other districts and other professions were similarly represented in both groups.

Findings

Research Question #1: What influences a teacher's initial decision to learn more about developing online courses?

Participants in the secondary online learning program identified a clear interest in learning more about the program because of its innovative nature and the ability it seemed to have to reach more students. The majority of the responses full participants offered identified the innovative nature of the program as a reason they chose to participate. The majority of responses partial participants offered identified reaching more students through new ways of instruction. In each group additional reasons were offered. Those reasons included the opportunity interact with peers, the possibility of a more flexible schedule, an interest in educational technology, a competitive edge over other school districts, and a personal interest in online learning as a means to overcome an instructional obstacles for a partially deaf instructor.

Other notable findings from this research question include the fact that six out of the eight comments regarding an interest in the online program because of its innovative nature came from full participants. In addition, there was an equal number of participants, three, in each group that identified an interest in educational technology as a reason for participating.

The finding that most of the responses offered in this area identified an innovative approach or a new way to reach students is consistent with previous research done with online programs at the secondary level. Hawkins et al. (1996) in one of the first studies

of secondary online programs identified that it was central to the online project that administrators, teachers and students saw the importance of the innovation. It was clear from participants in this study that innovation was a primary reason considered by multiple program participants. Hawkins et al. (1996) also identified that teachers viewed distance learning as a way to expand their professional expertise. It would again be true for this study as well. Nine of the 21 study participants identified an interest in the program being a new ability to develop additional skills that would allow them to reach more students. Most prominent among the partial participants was the desire to reach more students as a primary consideration.

In addition to research done at the secondary level, research from post-secondary studies indicated that persons involved in post-secondary online learning identified reaching new audiences, developing new ideas, furthering a technology interest, being involved in emerging instructional technologies, and job satisfaction as reasons for becoming involved in online learning programs (Betts, 1998). Data from this study confirms that similar reasons for participating in online programs exist at the secondary level.

Three reasons for participation in an online learning program emerged from this study that have not been reported previously in the research literature. First, one participant identified a reason for participation as looking for a competitive edge over offerings from other school districts. Second, one participant identified seeing the program as a way to help with delivering instruction as a partially deaf person. Third, two participants identified the flexible nature of a teaching schedule that online instruction seemed to be able to offer.

Participants in the online program also responded to an inquiry about reasons they considered not participating. Reasons identified were similar to barriers experienced by instructors in post-secondary institutions (Betts, 1998) and included an increased workload, lack of recognition, inadequate reward and/or compensation, improper policy alignment, and faculty perceptions of their lack of technical expertise. Differing from Betts (1998) findings, however, was that only one participant identified inadequate compensation as a reason she considered for not participating in the program. Betts had a greater amount of study participants identify compensation as a barrier. It is possible that

inadequate compensation may not appear to be as significant an issue for secondary teachers, although the sample size precludes making such a determination.

An area of strong corroboration between post-secondary faculty and the faculty in this study is the barrier of time involved in learning how to develop and implement online courses. It was the most frequently mentioned factor considered for non-participation. Ten of the 21 participants mentioned time as a reason they remembered considering. Some of the references to time also indicated a concern for an increase in workload, but the predominant comment participants offered was a concern for time that would be required.

A person's perceived ability to learn new technologies was also a barrier to online course instruction by Rogers (2001). In the present study, participants self-identified the amount of training they felt they would need in order to learn new technologies. The researcher placed data into three groups: those who said they needed no training other than their own exploration, those who needed a little training, and those who felt they needed extensive training and a longer learning curve. Five of the nine full participants identified they would learn a new technology by exploring it on their own and no full participant identified that he/she had a great fear of technology. Five partial participants also identified that they would not need any training to learn a new technology. Three partial participants identified a high need for training and a great fear of technology.

Perceiving oneself as learning new technologies with relative ease did not necessarily translate into completing online course development and delivery. The only direct correspondence in the present study was that of the three participants who identified a great fear of technology, none completed course development and implementation, even though two of the three individuals hoped online course training would help them overcome this fear.

Next, participants were asked about their level of technology use in the classroom before starting the online program. The researcher established four categories when coding the responses participants offered. A designation of "basic" was given to those people who identified word-processing as the only technology used in the classroom. "Advanced basic" designation was given to people who identified using some software programs beyond typical word-processing programs. "Advanced" was given to people

who use Internet applications, laser-disk technologies, assistive learning technologies, and other technology programs or devices that require a significant amount of training to use and implement with students. "Expert" designation was given to people who have taught instructors in the use of educational technologies and their integration into the classroom.

Full participants were evenly distributed among the categories. Two participants were basic, two were advanced basic, and three were expert. In contrast, the vast majority of partial participants, 10 out of 12, were considered basic and advanced basic. Only one person was designated in each of the advanced and expert categories.

It was anticipated that those who were experts in instructional technology would have a higher completion rate. Likewise, it was anticipated that those who had little use of instructional technology in their classrooms would have a lower completion rate This seems to be true, although not exclusively so. Not all advanced and expert participants completed the program. Likewise, not all in the basic category failed to complete the program. Past use of instructional technology may be one indicator of who might be likely to develop and implement online courses.

In summary, Rogers (2001) identified internal resistance to distance education programs as "teacher attitude or perceptions about technology and a person's perceived level of technology competencies" (459). She also identified external barriers as "availability and accessibility of necessary hardware and software, the presence of technical personnel and institutional support, and a program for staff development and skill building" (459). Some of the full participants fell into a basic use category which may indicate that this program supported some individuals in overcoming their negative perceptions about their own technical expertise and lack of experience.

Research Question #2: What factors influenced participants' perceptions of receiving an effective training experience in online course development and delivery?

First, not all participants had the same training experiences, that ranged from small group instruction, individual instruction with the program instructors, individual exploration, and optional coursework provided outside the district. The majority of participants, 14 of the 21 total participants, participated in small group training, and,

when further assistance was needed or a program participant could not attend small group sessions, individual instruction was the primary method of training. Three individuals supplemented their district training with college coursework, and two also identified they trained themselves, in part, by exploring the software on their own.

Overall, participants identified that the most influential factor in their training was the instructor. Twelve of the 21 participants made references to the instructor's ability to provide a variety of learning activities, to meet the needs of a wide variety of individuals, to readily answer questions and solve problems were the qualities that participants, and to provide encouragement. Previous research by Hussman and Miller (2001) and Frantz and King (2000) would support the likelihood that instructor/administrative support would emerge as component of successful elements in a training program. Hussman and Miller (2001) identified from their research that online instructors were looking for encouragement and recognition from their administrators as a key component to the success of their online instruction.

Hands-on experience was the second most identified effective training factor. Ten out of 21 Participants referenced an appreciation for hands-on activities that allowed them to practice instructional units in the online environment with their colleagues. One individual went as far as describing the experience as "Extremely nerve-wracking! I couldn't imagine that after so many years of teaching I would be sweating bullets at home at my computer. " This participant also identified this as the most effective element of her training. Research and the results of this study would support that "hands-on" training needs to be a critical component in training teachers for online course development and delivery. Dennis Sparks (1999) in an interview with Susan Loucks-Horsley identifies this type of staff development experience as "practice teaching" (58) that creates an opportunity for instructors to deliver their curriculum and reflect on the experience with other professionals. This was one of the design elements in the online training.

In addition to looking at the total participant responses, the researcher compared and contrasted full and partial participant group responses. One key difference between the groups was having a curriculum (e.g. content, lessons, outcomes) from which to begin the process of developing an online course. Seven of the full participants and none of the

partial participants mentioned having an established curriculum to work from while involved in the training. Essentially those who brought with them an established curriculum did not have to focus on developing new course content. They could focus on transferring an existing curriculum to an online means of delivery. Those who did begin with an established curriculum faced two large tasks: developing content and learning a new means of delivery.

Another difference between full and partial participants was 3 out of 12 partial participants indicated they felt the training environment was safe. These three individuals were also the individuals who mentioned in the previous section that they had a concern before starting the program that their technology skills would not compare to their peers. A safe and supportive learning environment, therefore, was likely to have been a more present concern for them. There were no full participants who indicated that the safety of the learning environment was an influence on their training, perhaps because they did not hold the same initial concerns regarding how they would compare with their peers.

Participants also identified ineffective training elements. One very clear concern raised by multiple participants was the lack of clear guidelines for creating web pages. Many full and partial participants referred to the difficulty they experienced when designing web pages without written information or guidelines about the visual and textual elements needed to create an effective web page.

Another ineffective training influence mentioned by participants in both groups, although just one full participant and one partial participant, was the amount of work involved in learning a new software program. Participants identified that they believed the program directors were using sound judgment when they decided to change web page software during the online program. Understandably, however, they expressed concern about the amount of additional work this created. This last comment would be supported by research that identifies the difficulty presented by software's short-life span (Burge, 1993). Future instruction in online course design and delivery would benefit by considering what principles of course design and development would be best learned and focusing less on a specific software to deliver them.

Full participants only identified one other ineffective influence on their training. Two members identified that they would have preferred to have less instructor-led demonstrations and more hands-on activities.

One final ineffective influence was mentioned by partial participants. Seven out of the 12 participants in this group identified a need for additional collegial support after the training was complete and indicated that the training program was too short or that they were being "cut loose" too soon. Providing follow-up training sessions or developing systems of support for teachers who have been trained might have a further impact on those who did not complete the online program. This finding may also relate to a previous point that all the partial participants were essentially engaged in two major development efforts--content and delivery, instead of just one.

The last question participants answered related to this research question was what improvements they would recommend. The two most frequent recommendations made by study participants were increased mentorship and accountability. Two full participants and four partial participants recommended that having a mentor who had taught online courses would improve the training. Participants saw mentorship increasing their ability to get helpful information when designing web pages and learning about successful web course design. Eight participants, four full participants and four partial participants, identified greater accountability as a potential improvement. Partial participants mentioned that being held to deadlines for units and withholding pay until a course was delivered would have helped them complete the program.

Research Question #3: What factors influence the course development experience?

As mentioned in the last section training was more effective when participants had an existing curriculum that was ready to be placed on the web. This was also the case when it came to course development. Seven full participants described their course development experience as taking an existing curriculum and placing it on the web, although the transfer process involved numerous changes, adjustments, and enhancements. For example, links to Internet resources were added to the online versions of previous courses. Five participants who worked with existing curriculum also indicated that the transfer process or the course redesign required an extensive amount of

planning and organization, even if there were an existing curriculum present. In particular, redesign of assignments and instructional materials were identified as time intensive.

In contrast to full participants, partial participants were not as likely to have worked with an existing curriculum. They spent much of their course development effort using the web to locate curriculum materials. Seven participants identified that their major approach to developing an online course was to start by seeing what materials were already available online. Only 3 of the 12 participants in this group started with an existing curriculum and tried to place it on the web. Consequently, when participants were asked what advice they would offer people who were about to start developing an online course, it was not surprising to find that multiple participants suggested that teachers have an existing curriculum and do planning ahead of time before attempting to develop a course.

Participants also provided information about what parts of the process they found enjoyable. Most frequently mentioned was learning more course content. Nine of 21 participants identified this as an element of the course development process they enjoyed. Also frequently mentioned was learning new instructional delivery techniques, identified by eight participants.

There were two differences between full and partial participants in terms of factors perceived to influence course development. First, four partial participants and one full participant identified that working with colleagues was an enjoyable part. Second, only full participants identified an appreciation of the complexities of the traditional classroom environment that they were not able to recreate in online environments. Specifically identified was the ability of an instructor in a traditional classroom environment to be more flexible and adaptive to the changing classroom environment. Full participants indicated that in a traditional classroom, they were better able to "wing-it" when questions or discussions took the lesson in a different direction. The online environment was less malleable to on-the-spot redesign of a lesson or immediate enhancement or clarification of directions in the assignment, for example.

Frustrations participants had with the course development process were similar between the full and partial participant groups, except partial participants reported a

greater number of frustrations. The two most frequent responses for both groups were frustrations with technology breakdowns and intricacies (such as having to learn HTML to create interactive assignments) and the amount of time it took to develop and revise course materials. The other frustration that full participants reported was the solitary nature of the course development. Several partial participants reported being frustrated about not knowing the long-term status of the program, including funding support and lack of mentoring opportunities.

One significant difference between full and partial participants was that partial participants were frustrated by developing a course curriculum at the same time they were developing the web materials for the course. Again, this emphasizes the importance of having curriculum ready to be placed on the web prior to engaging in the learning process for teaching online courses.

Participants were specifically asked to comment about the workload involved in course development. Some differences were evident. Four full participants perceived the workload necessary to develop an online course as equal to that of developing a traditional course. The other five full participants identified the workload as far greater than developing a traditional course. Only one partial participant identified the workload as about the same, but she also reported receiving a large amount of assistance from program instructors. All of the other partial participants saw the workload as far greater. Recall, however, that most partial participants were concurrently involved in curriculum development and learning about new online instructional strategies. This may account for their almost unanimous perception that online course development was a significantly greater amount of work than traditional course development.

Research at the post-secondary level corroborates this finding identified that online teachers experience a great increase in workload when teaching online classes (Care, 2001; Gabriel 1993; Harasim et al., 1995; Hussman, 2001; and Rockwell, 1999). This was demonstrated in this study as well.

Finally, participants were asked to offer suggestions for teachers about to start an online course development process. Again, the most frequent suggestion was having a curriculum developed before starting the online course development training. Others suggestions included getting comfortable with technology, enrolling in an online course

as a student, getting some type of online training ahead of time, and making time in one's schedule to do the work.

Research Question #4: What factors influence online course implementation?

Only full participants responded to this research question. Specifically, they were asked to describe their experience in delivering their online course, and to offer suggestions for other teachers regarding online course delivery. The primary focus of participant responses was on changes they would make or did make in subsequent offerings of the online course. The key change that participants identified was the need to be in constant communication with students. They discovered that if they were not in constant communication with students via email or chat sessions, students were not as engaged in the course and did not complete assignments. Full participants also reported difficulty when they were not as available to students when students were completing assignments. They learned that they needed to communicate with students to see if there were questions about the assignments so they could revise and/or clarify assignment directions. One participant explained that she had to become a "visual" instructor in that she provided visual representations of assignments for students to see, as well as providing multiple references to where students could find examples of how assignments should be completed.

Most full participants commented about the need to be highly structured and organized. Three participants revealed they had to change their natural orientation from being a random-abstract person to being more of a concrete-sequential person. The online environment required that specific deadlines and directions be posted and accessed in multiple places. Participants also identified that being concrete and sequential helped their students be more successful as expectations were made more clear to students.

Student motivation was another factor frequently mentioned in course implementation. Teachers of online courses in which students were enrolled as a means of making-up a lost credit felt that these students were not motivated to engage in the online course. Instructors struggled with how to reach this population, especially in the online course given difficulty in making daily contact with students. In contrast, instructors felt online instruction was a very successful environment for students who

were motivated to take the class. For these students, instructors witnessed much success and many examples of outstanding student work. With only one exception, instructors viewed student motivation and achievement in the online learning environment as directly linked.

One set of experiences of particular note involved teaching adjudicated youth through online courses. All three full participants who had adjudicated youth enrolled in their courses viewed these students as very successful in the course. They remarked that some "traditional students" did not perform as well as the adjudicated students. They also reported great personal satisfaction in reaching a student population they did not initially plan to reach when they considered teaching online.

Other suggestions for newcomers to online teaching that were not mentioned previously included a willingness and readiness to accept failure and to learn from mistakes. Three people identified that they would suggest to people that they be open to learning from the mistakes. One participant commented on the resilient nature of his students when he as the course instructor made mistakes. He noted that students realized this online experience was new for both the teacher and the students.

Research Question #5: Are there other factors that, if present, would have enabled persons who did not complete course development and delivery to do so?

Partial participants were the respondents for this research question and identified several factors that they felt would have better enabled them to complete course development and delivery. The most frequent factor mentioned was additional time. Specifically, they indicated needing more time to work on the course. They did not indicate needing additional time for training. Time was perceived to be a scarce resource, and some participants expressed that additional compensation would not be sufficient enough an incentive for them to offer the time it would take for them complete the course development and delivery process. In contrast, a few individuals also mentioned that if there were additional funds available they would consider going further with their course development.

Related to compensation was accountability. Three individuals mentioned that there was no accountability for completing the program. One participant mentioned that

if she were held accountable to monthly progress, she would have completed the course. Similarly, another individual again suggested making course development and delivery an expectation of participation and a contingency for compensation.

The next factor mentioned by several participants was a reassurance or "guarantee" that the status of the program would be long-term. Three people expressed interest in completing their courses if they were guaranteed support from the academic department, students to take the course, and funds to pay them for their work. One individual shared he was not willing to put in additional work until these conditions were in place. There seemed to be an underlying concern that the amount of work it would take to complete the course development and delivery needed to be offset by guarantees that the effort expended would not be wasted.

Two partial participants identified that they did not go further in the program because they did not have necessary technology at home. Even though they could use the equipment at school, they wanted the flexibility to continue to work at home. One participant stated that if the district were willing to provide her with the necessary technology at home, she would probably have finished developing and delivering a course.

Finally, three of the partial participants simply would not consider going further with the online course development process because it was just not a "style fit". They were very clear in explaining that the highly organized, sequential nature of the online class did not align with their instructional delivery preferences. They did recognize that the online environment is a good learning environment for some students, but the felt such an environment was not a good match for their teaching strengths.

Research Question #6: What are the perceived effects of online course instruction for students?

Full participants provided information to address this research question. Participants uniformly felt that online education was an appropriate instructional delivery tool for some students, but not all students. Specifically, full participants shared that students who were not highly motivated to take the course did not have a successful online class experience. For example, instructors who taught students who enrolled in

the online course as a method to make-up a credit described their experiences as "challenging" and "frustrating". Overall, however, faculty identified positive student interaction and effects. Students enrolled in online courses who were not looking to earn a make-up credit were described as doing well.

Three of the nine participants viewed the online classroom environment as respectful and safe. One shared she had "fabulous" attendance in her online classes. Some faculty were surprised and pleased that the online environment supported a higher level of personal disclosure and classroom participation for some students. Five participants made specific reference to students they had taught in a traditional classroom who behaved in distinctly different ways in an online environment. In particular, there was an increase in the amount of participation and the amount of information offered by these students in the online environment.

The above finding contrasts with findings reported in the Hawkins et al. (1995) study, in which the authors found "participation by both teachers and students is very similar for DL and traditional classes" (p. 3). Some of the difference between Hawkins et al. findings and the present findings may be attributed to different software and audio capabilities of this district's program that were not available in its present form until after the Hawkins et al. study. Some of the difference may also be attributed to the fact that instructors of the online course in the present study had taught some of the students in a traditional course prior to teaching the students in the online course.

Research Question #7: What are the effects of online course instruction for the participating teachers?

The intent of this question was to see whether instructors identified changes in their instructional practice that resulted from their program experiences in the online program, regardless of whether they actually delivered an online course. Almost all (19 of 21) participants in the study indicated their online course development and delivery experiences resulted in changes in their traditional classroom instructional practices. The two who did not perceive any changes were among those who did not did not complete the online course development and delivery program.

Among those who identified changing their instructional practices, the most frequently identified change was an increase in the amount of technology used in their classroom, mentioned by 12 of the 19. Three of these 12 participants were categorized for the purpose of this study as people who were already expert users of instructional technologies before their online program experience. All three also were people who completed course development and delivery. Although, one of the participants who did not identify changes in his use of technology as a result of the online course experience also was considered "expert" in prior technology use.

Twelve of the 21 participants also indicated an increase in the amount of resources they now had available to their students. Four of these twelve completed the program and eight did not. Those who did not complete the program indicated having more knowledge of course content available via electronic sources. Three individuals said they are working on web pages as a method of parent and student communication. Similar comments came from the four participants who completed the online program. They too were offering more materials to their traditional classroom students via the Internet. All four also identified that they are now using their online course to supplement the curriculum they were offering students in their traditional classrooms. Two use some of the online lessons in their traditional classes. All four use their online course as a tool that assists students who miss classroom lessons. They provide information about specific class sessions as a way to make-up missed classroom time for students.

Many participants shared examples of personal growth that resulted from their online program experiences. For example, one participant shared that she learned patience. She expressed that she was better able to understand when students were frustrated because she had been frustrated teaching the online course. Other responses in this category included suspending judgment about a student's ability based on how they look, country of origin, or economic class, for example. Quite compelling was the comment,

> *I have learned that teaching without eyes is very powerful because you don't know where kids live, the color of their skin, their personal characteristics, their family-you can't make assumptions. All you know is that they are there*

ready to learn because they have logged in for the night. They are there because they want to be there.

A few other participants remarked they had made changes in teaching style. Two participants who completed the online program stated that they now were more organized and systematic in the delivery of their lessons. One instructor shared she was now better able to develop curriculum because of taking apart the online course and developing curriculum in a different manner. She identified that she had to analyze and evaluate her curriculum and make certain the objectives she wanted achieve were clear to her and her students. She also identified having to streamline and refine her assignments.

Research at the post-secondary level identified a change from online instructors starting out as more teacher-centered and moving to a more student-centered pedagogical approach (Harasim, 1995). While there is no direct evidence from participants that this type of transformation occurred, participant responses described above suggest that some adapted their approaches to instruction in ways that better met the needs of the students.

Final questions: (1) As you reflect on your program experiences what do you envision for the future of online learning programs? and (2) what word or words would you use to capture your program experiences?

All participants reflected on the future they saw for online learning programs and identified words they would use to capture their experience in the program. Clearly, participants viewed online instruction as continuing to grow. They did not, however, view online instruction as growing so large that it would take the place of traditional classroom experiences. Most frequently stated as a reason for continued growth was the success of online programs at the post-secondary level. In addition, six participants felt that online instruction would increase as a means of reaching more rural and home-schooled students. The two potential limiting factors for online growth were the amount of funding available to support program development and implementation and the number of students interested in pursuing online courses.

As a final reflection, participants were asked to capture their online experience with a word or series of words. These responses were categorized by the researcher as having either positive or negative connotations. Full participants, however, offered more

words with positive connotations, and partial participants used a significantly higher number of words with negative connotations. All study participants identified at least one word with a positive connotation when they answered this question.

Summary of Findings

Frantz and King (2000) developed the DEL model to incorporate the multiple facets of the distance learning system. Much of the prior research in distance learning in the form of online learning done at the secondary level focused on student achievement in online environments. As Frantz and King (2000) demonstrate with their DEL model, student achievement is only one component of a much larger system. This study focused on an element of the model, faculty, that has not received much attention in the literature focused on junior high and high school online learning programs.

The participants who chose to participate in this online program came from various academic disciplines, taught at the secondary level, had a range of years of experience in the teaching profession, and had not been involved with online learning prior to their involvement with this program.

The reasons program participants identified for choosing to participate in the program were similar to reasons post-secondary faculty identified in previous studies. . Participants most frequently identified participating in the program because of its innovative nature or its perceived ability to help them reach more students with new instructional delivery techniques. Some additional reasons that may be unique to secondary school programs barriers were also identified by study participants.

Likewise, the reasons participants offered as reasons they considered for not participating were similar to reasons offered previously by post-secondary faculty. The time participants anticipated it would take to complete online course development and delivery was the most frequently mentioned reason participants offered. Other reasons included compensation, proprietary ownership of online curriculum, and a person's perceived ability to learn new technologies.

As for a person's perceived ability to learn new technologies, perceiving oneself as learning new technologies with relative ease did not necessarily translate into

completing online course development and delivery. However, all of the participants who identified a great fear of technology did not complete the program.

The training program seems to have been enhanced by the quality of the instruction participants received and their expressed satisfaction with the instructors methods. The most frequently mentioned element of the training that participants found successful was the hands on experiences they had with delivering an online lesson to their colleagues. The most frustrating part of the training for most participants was the lack of written materials for creating web pages. Partial participants also expressed frustration with a lack of opportunities to receive follow-up support through collegial support groups or access to mentors, and a lack of accountability for bringing an existing curriculum to the online course development training.

Partial participants also indicated that not using an existing curriculum resulted in a frustration in the course development process. Because they did not start with a curriculum in mind, partial participants were more likely to spend their online course development effort using the web to locate curriculum materials. In contrast, full participants were more likely to work with their existing curriculum and place the curriculum materials on web pages with links to electronic resources. Full participants found frustration during course development when the links they established expired and new links needed to be found or curriculum needed to be revised as a result of the expired link.

The workload involved in creating courses was perceived differently by full and partial participants. Full participants were more likely to see the workload as equal to creating a traditional classroom course. Partial participants were more likely to identify the workload as far greater. the fact that most partial participants were concurrently developing curriculum and learning new online instructional delivery strategies may likely account for the almost unanimous perception that online course development is significantly more work.

Suggestions participants would offer to faculty considering online course development included, first and foremost, to work from an existing curriculum before starting online course development training. In addition, it was also recommended that

interested faculty either participate as a student in an online course or take prior training in developing online courses.

Suggestions participants offered for instructors who are going to teach an online course included being open to mistakes and failures. Participants indicated that they constantly needed to revise their assignment directions and change them so they were more "visual" for students. Participants also identified that they would need to provide directions multiple times and make direct communication with students if the assignments were not completed on due dates.

When the completed courses were delivered to students, program participants learned that regular communication with their online students improved student success in their course. They also discovered online courses need to be presented to students in a highly organized, sequential manner. Some participants reflected that the degree of organization required was a difficult change they needed to make in their instructional delivery. Instructors found that students who were successful in a traditional classroom environment were also successful in the online environment. In contrast, students who enrolled in online courses as a way to make-up missed or lost course credits struggled.

Numerous effects of online instruction on students were reported by instructors. Some expressed surprise at seeing students who they taught previously in a traditional classroom increase their level of personal disclosure and class participation in the online environment. Some also mentioned an increase in attendance and no behavior concerns.

The last research question asked participants to reflect on the changes they made to their classroom instruction as a result of their participation in the online course development and delivery program. Nineteen of the 21 participants identified some type of change in practice. Changes included using more technology in the classroom, using more electronic curriculum materials with their traditional classrooms, supplementing their traditional lessons with online lessons, and using online courses as a means to assist students when they were absent from class.

Participants in this expressed that they viewed online instruction as continuing to grow. They did not, however, view this growth as limitless. It was anticipated that growth would be limited by the amount of funding available to support online course development and delivery and by the amount of student interest in taking online courses.

In reflecting on their online course experiences, all participants used words with positive connotations to capture their online course development and delivery program experiences. Partial participants were more likely to include words with negative connotations in addition to the positive words they offered.

Implications for Practice

As mentioned in Chapter I, faculty is an essential element in delivering online instruction. Quite simply, without instructors, there is no potential for online programs within a district. If administrators are looking to start online learning programs in their districts, they should consider building a quality teaching pool through staff development experiences that provide extensive technology support, recently updated technology, multiple types of training experiences including small group and individual instruction, and adequate time for persons to develop and pilot online courses. In addition, administrators should also look to encourage people who already use technology in their classroom to become part of the program.

In addition, administrators will need to look at current policies regarding proprietary ownership of educational materials, release and compensatory time, and compensation for extra duties. Release time and compensatory time will need to be considered as possible methods of attracting additional instructors. Compensation structures will not be as great a barrier if release time and/or compensatory time are future options in the online program. Administrators would be advised to work with teacher union leadership to work through compensation issues with full knowledge that involvement in an online program will require a significant amount of time on the part of the instructor who is developing and eventually teaching the course.

When designing programs, administrators will need to consider funding streams well in advance of starting any online training. If the program is perceived by instructors to be a short-term program with no lasting place in the district, the investment of time that is necessary to develop and instruct a course will be a significant barrier to teacher participation if the instructor does not see her work having a lasting place in student course options.

As the number of secondary faculty who have taught courses continues to grow and new faculty enter the district, a new population who might be interested in online learning will develop. In addition, as word of the program's results passes through the district, new individuals who are at a point in time in their educational career where they are seeking new instructional experiences to enhance their classroom instruction will likely consider online learning as a possibility. As more faculty become involved in the program, it is apparent from this study that an increased use of online instructional technology will result.

If district or program administrators are looking for persons likely to be successful in the online program, they should consider faculty who are already using educational technologies in their classroom. They should also seek instructors who are situated to make time in their schedules to accommodate the work necessary to complete online course development.

When planning a training program, it would be beneficial for administrators to require training participants to have an existing curriculum the faculty member would like to place online. The software that the faculty member would be using to place the course online should be a software that, if possible provides assistance in designing web pages and can be easily upgraded without much additional training required for faculty to implement the upgrades. another important support during the training program would be the inclusion of mentorship opportunities, especially focused on supporting participants who identify themselves as "fearful" of new technologies. Finally, the program would seem to best serve the needs of the participants if it were able to incorporate many hands-on activities into the training.

Program administrators would also be advised to determine the population of students best served through online programs. Looking a past, present, and future research surrounding profiles of students who are successful in online environments would allow the district to tailor its marketing and devise course offerings that would support students who are likely to be most successful in online environments. Based on this study, two types of students seemed well served: those who do well in traditional classes and adjudicated youth. In all of the responses that referenced adjudicated youth, there was a clear indication that the instructors had positive experiences teaching this

student population and that the adjudicated students were successful in the online environment.

Finally, the program administrators would help the online program by locating additional student populations in addition to the students in the district. Program participants saw the program growing if it were able to draw students from other districts, rural areas, or home-schooling situations. Funding would of course need to follow the students, but this type of growth would ultimately support the program and reinforce for instructors the long-term status of the program.

Recommendation for Further Research

Future research about factors that influence teacher participation in secondary online learning programs should focus on persons who have limited experience with and concerns related to learning and using technology. Learning what assistance would help those individuals overcome this fear would help increase the number of persons who are interested in online learning but are held back by their own perceptions of their inability to learn new technologies.

Secondly, additional research would also be helpful if it could identify what factors in the course development process could be streamlined to minimize the workload necessary in developing online courses. Several participants in this study identified a perception of the course development process as "equal" to the development of a traditional course. What was it about their experience that helped them see the workload as equal and allowed them to complete their course development?

Future research should also focus on policies and practices that facilitate secondary teachers development and delivery of online courses. Creative compensation structures, release time, and flexible scheduling for online instructors would be a few of the areas that were mentioned by study participants. One other area that was mentioned by participants that deserves attention is mentorship. It would also be beneficial to examine the influence of mentoring online instructors. Does mentorship increase the likelihood that an individual will be able to complete developing an online course? Does

mentoring influence the quality of the online course and the success of online students? This information would be helpful to administrators who are developing training programs for online instructors.

Finally, It would also be beneficial to look further into online programs and examine the characteristics of students who are successful in online environments. Information learned in this study suggests that there may be characteristics that allow some students to excel in online environments while others struggle. Online learning may be another avenue to help students find greater success with their learning.

Conclusion

Educational options for students continue to grow. Online learning is an emerging option that is taking its place in a range choices available to junior high and high school students. As educational administrators continue to learn more about online options they are able to present to their students, a greater understanding about the student population online learning serves well will result. In addition, a more robust literature base will provide further information about best practice in online learning programs. This literature will help bring about the ultimate goal of increasing educational options that allow for greater student achievement.

This study captured the experiences of a group of instructors who took the initiative to be the first persons in the district to explore what option online learning would have for them and for their students. The study presented their insights and recommendations for designing a successful online learning course development and delivery program.

Through the course of the study, the researcher was able to learn information that will aid future research by providing a description of the factors that influenced faculty participation in the program, including the program participants' perceived effects of online learning on their students.

As this program was a staff development based initiative, an expected outcome would be some sort of change in practice that would better enable an educational

professional to increase student achievement. As educational professionals work to increase student achievement, it is beneficial to find ways that engage and excite them as they work toward this goal. Online learning, in the words one participant shared as she summarized her experiences in the program would appear, from this study, to have the potential to do this.

> *It was an amazing journey and a rewarding experience. I now see students and think--you would be doing so much better if you were taking this online. It has also encouraged me to bring more technology into my traditional classes and reminds me of what I am asking students to do, take risks. I am not intimidated by technology anymore; I am encouraged by it.*