

Determining the Impact of On-line Practicum Facilitation for In-service Teachers

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Abstract:

This study investigated the impact of a project-based graduate practicum experience that was facilitated on-line. The study investigated the affects of the on-line practicum experience by: (1) using quantitative data to assess the learning and professional growth of the practicum participants in comparison to a group of teachers that did not participate in the practicum experience, and (2) identifying the qualitative components of the practicum experience that facilitated successful completion and implementation of best practice teaching skills of the practicum participants. Findings indicated that teachers did change instructional practices as a result of the practicum experience, and identified three critical components of the on-line practicum: 1) use of meaningful learning activities, 2) collaborative learning communities, 3) structure of the practicum project. Effective use of these components can facilitate significant professional growth for in-service teachers engaged in on-line practicum experiences.

The use of practical field experiences, or practica, as a primary component of teacher education programs is pervasive. Teacher educators, accrediting agencies, and administrators alike believe that practicum experiences are a valuable component of teacher education programs and the inherent value of field-based experiences is generally agreed upon (Simpson, 2006; Falconer & Lignugaris/Kraft, 2002; Soares & Soares, 2002). Practica are expected to provide opportunities for teachers to gain valuable classroom experience and learn how to implement new instructional strategies in authentic classroom environments. Field experiences for pre-service teachers often include weekly opportunities for observation and participation in daily classroom activities in school settings. Practica for in-service teachers are often used

as capstone or culminating experiences as part of a requirement for teachers seeking additional certifications or completing graduate degrees. Regardless of the level and specifics of a practicum experience, the primary goal is to provide exposure and "hands-on" experience for the participants.

With the advent of new technologies, practicum experiences have the potential to make more of an impact on teachers' professional growth. In recent years teacher education has begun to embrace various distance learning models in order to allow teachers to pursue additional education and professional growth experiences. Teacher education programs have attempted to reach out to teachers in the field by delivering courses using a number of delivery strategies to facilitate coursework including: audio and video conferencing, holding courses at local school sites, and using the internet (Knapczyk, Frey, Wall-Marencik, 2005; Ludlow & Brannan, 1999). The use of on-line courses is continuing to expand and teacher education continues to explore the utility of on-line environments to facilitate the delivery of programs including practicum and the supervision of field experiences (Ludlow & Brannan, 1999; Beattie, Spooner, Jordan, Algozzine, & Spooner, 2002). Despite the increasing inclusion of on-line course delivery in teacher education programs, relatively little research has been done on the effectiveness facilitating the practicum component of teacher education on-line (Simpson, 2006).

On-line delivery of teacher education programs may hold the potential to reach a greater number of in-service teachers than on-campus programs, providing professional growth opportunities to teachers that are geographically isolated. This is particularly important due to the increasing numbers of teachers that are only provisionally certified in areas like mathematics, science, and special education (USDOE, 1998). Consequently, determining the outcomes of the practicum component of on-line teacher education programs and their ability to facilitate professional growth are among the questions currently driving the field of teacher education (Cochran-Smith, 2001).

Purpose of the Study and Research Questions

The purpose of this study was to explore the impact of an on-line practicum examining its capacity to facilitate teacher professional growth. The study compared teachers enrolled in an on-line course and practicum experience to those enrolled in an on-line course not taking a practicum in order to determine the impact of the practicum on teachers' self-assessment of instructional practices. In addition, the study sought to explore the design of the practicum and identify components of the instructional activities that were integral to facilitating teacher learning and professional growth. The study attempted to answer the following questions:

- 1) Did the practicum affect teachers' classroom instructional practices related to course content?
- 2) What aspects of the practicum facilitated teacher learning and impacted teacher instructional change?

Methods

Research Design

A concurrent triangulation mixed methods design (Creswell, 2002) was utilized in this study. Mixed methods research designs integrate qualitative and quantitative features in the design, data collection, and analysis in a single study (Tashakkori & Teddlie, 2003). The combination of descriptive, comparative, and evaluative components of this study required a combination of quantitative and qualitative research methods in order to appropriately answer the research questions under investigation. Both a two-group pre-post quasi-experimental design and a qualitative case study design (Merriam, 2001) were used to investigate the practicum.

Participants

Participants in this study were enrolled in a graduate level teacher education program for special educators at a large Midwestern university. Participants could choose to complete: (A) a 3-credit hour course on Teaching Social Skills (TSS) to K-12 students with disabilities course, or (B) both the TSS course and a 3-credit hour practicum in teaching social skills. Sixty-six

people chose to complete only the course. Eleven teachers completed both the practicum and the course during the study. A random sample of eleven teachers was chosen from the teachers that completed only the TSS course to serve as a comparison group. A majority of the participants were between the ages of 26-35 and all but one participant had less than five years of teaching experience. The sample included teachers from across K-12 grade levels who were working in a variety of special education teaching settings including: self-contained classrooms (9), inclusion classrooms (11), and general education teachers (2). Many were working in special education positions with emergency or provisional licensure in special education.

Context of the Study

The practicum experience and TSS course investigated in this study were both offered as part of a teacher certification program in special education offered jointly across four campuses of a large Midwestern university. The program offers graduate coursework in special education through distance education. The program is designed to meet the needs teachers and other school personnel have for new strategies for teaching students who are at-risk or who display difficulties in learning and behavior.

The practicum and TSS course were primarily delivered through a university supported on-line environment courseware called Oncourse. The Oncourse software program is an on-line instructional support program that was specifically designed to assist instructors and students (in this case teachers enrolled in the course) with a variety of course-related functions. For example, in Oncourse there are folders and on-line work areas where an instructor can display a course syllabus, make announcements, send handouts, and post grades; where teachers enrolled in the course can post their pictures, outline personal profiles and send each other email; and where the class can hold discussions and have chats. All the on-line components of the practicum were conducted using the Oncourse courseware tool. The web-based practicum and course activities utilized an asynchronous format. Teachers posted information to discussion

forums and responded to their peers' postings based on a time schedule provided by the instructors.

Practicum Design

The study investigated a three credit hour practicum experience that was facilitated on-line and designed to build upon the knowledge teachers gain while completing a concurrent TSS course. The practicum was intended to provide practicing special education teachers with specific opportunities to implement the skills they were learning in the TSS course. A project-based practicum design was used to provide structured opportunities for teachers to apply course concepts in classroom settings (Howard, 2002; Blumenfeld et al., 1991). As part of the project, teachers completed a series of 14 journal entries (one for each step of the project) during the 16 week semester. The journal served as a reporting mechanism for teachers as they completed the tasks associated with their practicum project. The journal entries required each teacher to describe his or her own classroom and target student, implement a variety of social skills assessments, develop a plan for instruction of a target student, and implement and evaluate the social skills instruction they developed. In addition, journal entries provided opportunities for Computer Mediated Communication (CMC) including teachers to asking questions, reflecting on their experiences, and getting feedback from others.

Each practicum participant was engaged in their own collaborative learning community (CLC) (Howard, 2002; Greene & Magliaro, 2004; Wenzlaff & Wieseman, 2004). The CLCs included an instructor and two to four peer coaches. The practicum was monitored on-line by five instructors who each supervised between four and seven practicum teachers during the semester. Peer coaches were teachers that had completed or were currently enrolled in the TSS course. Peer coaches were required to provide weekly feedback to the teacher completing the practicum experience and were expected to ask questions to clarify decisions and activities of the practicum teacher, offer suggestions and critical feedback, and in other ways act as this

person's resource. Five instructors each supervised between four and six of the CLCs. Instructors participated regularly in the CLCs as facilitators and monitored the discussions throughout the practicum.

A final feature of the instructional design of the practicum was the direct link between the practicum and TSS course. Practicum tasks were coordinated with the content that was being taught in the TSS course. For example, teachers enrolled in the practicum and TSS course learned about a type of social skills assessment or observation procedure as part of a weekly course activity and were then expected to carry out the procedure in their classroom. They would then report on their experiences with the procedure as part of a journal entry for the practicum. In this way, the course and practicum activities were integrated each week and complemented one another. The ongoing practicum project was designed to require teachers to consistently apply the course concepts, while course activities were designed to help teachers understand concepts that they would then implement in their practicum project.

Quantitative Methods

A two-group quasi-experimental design was used to examine teachers' understanding, application, and implementation of concepts from the course. Differences were examined between teachers that enrolled in the course versus those who enrolled in the course and the practicum. The design is represented in using the notation developed by Campbell and Stanley (1963) as follows:

Practicum Group	O -----X-----O

Course Only Group	O -----O

In this study, teachers completed pre and post questionnaires (O) designed to measure changes in their self-reported instructional practices related to the course/practicum. The treatment (X) for the study was the practicum experience. Two participant groups were identified.

Practicum Group. This group consisted of the eleven teachers who: (A) enrolled in and completed both the TSS course and the

associated practicum; (B) identified themselves as a full or part time teacher or teacher's aide (not a full time student); (C) completed both pre and post questionnaires; and (D) consented to participate in the study.

Course Only Group. This group consisted of a random sample of teachers who completed the course but who were not enrolled in the associated practicum. In order to be selected as a participant in the Course Only Group participants met the following conditions: (A) identified themselves as a full or part time teacher or teacher's aide (not a full time student); (B) completed both pre and post questionnaires; (C) did not enroll in the practicum; and (D) consented to participate in the study. A sample of eleven teachers was randomly selected from a group of twenty-two possible teachers that met the above conditions.

Instrumentation. A questionnaire was developed by the researcher in order to obtain pre and post measures of the impact of the practicum and course. (See Appendix 1 for the complete questionnaire). The questionnaire was designed to measure teachers' self-assessment of instructional practices related to teaching social skills. A series of 34 Likert-type items were used to evaluate teachers' self-assessment of their instructional practices. Items were formatted with a stem and a five-point response scale (from 5 Strongly Agree to 1 Strongly Disagree) that asked participants to self-assess their understanding of course content, and their implementation of techniques and strategies related to course content. For example:

B10. I can write instructional objectives for improving social competence of my students.

Strongly Agree Agree Undecided Disagree
Strongly Disagree

Other items in the questionnaire asked teachers to self-assess the frequency and perceived effectiveness of their ability to implement these strategies. Examples of these items are:

C5. I plan lessons that focus on specific target social

skills needed by my students.

Always Often Sometimes Rarely
Never

D3. My ability to develop appropriate social skills instruction is...

Excellent Above Average Average Below
Average None

Items in these formats were scored on a 5 point scale with 5 points awarded for responses indicating high levels of self-assessment (e.g. Always, Excellent) and 1 point scored for responses indicating low levels of self-assessment (e.g. Never, None). Participants were given a minimum of 1 point and maximum of 5 points for each self-assessment item resulting in a total possible score range between 34 and 170.

Self-assessments are limited by a number of potential reliability issues including the possibility that participants' perceptions of practices differ from their actual practices. However, such measures have been shown to be an effective means of assessing teacher instructional behavior (Topper, 2004; Traub & Weiss, 1982). In fact, Topper (2004), suggested that self-assessment in conjunction with other data sources including qualitative might be an effective way to assess teacher change. This is particularly true when the self-report items cover a specific content area or component of instruction (Koziol & Burns, 1986). The self-assessment items on the questionnaire utilized in the study focused on the participants' evaluation of their own ability to understand specific concepts and implement practices related to assessing and teaching social competence. The items were directly linked to course objectives developed by the instructors.

Administration of the questionnaires. The pre and post questionnaires were administered on-line via Oncourse during the spring semester. Identical items were used for both the pre and post questionnaires including the content, order, and presentation of the items. In order to complete the

questionnaires, participants had to log on to Oncourse from any computer with an internet connection and then proceed to the questionnaire located in the "Tools" section of the course environment. Items then appeared on the participants' computer screen and participants responded to the items by using their mouse to click on the appropriate response. Oncourse recorded the Internet Provider (IP) address of each participant and logged the time of each entry and exit from the questionnaire.

Procedures for Data Analysis

Questionnaire data were collected from the secure Oncourse website immediately following the submission of final grades for the course and practicum. Data were entered item-by-item for each participant for the pre and post questionnaire items. Twenty percent of the cases were randomly selected to be checked for the accuracy of the data entry. A second researcher verified the sample cases by using the original item scores and comparing them to the data already entered into the database. Ninety-nine percent of the items checked were entered accurately. All data were then checked for violations of univariate assumptions for statistical analysis including normality of the data and homogeneity of variance. Levene's Test was used to assess homogeneity of variance. No assumptions were found to be violated.

Qualitative Methods

A qualitative case study method (Merriam, 2001) was used to explore the key components as well as the perceived benefits and effectiveness of the practicum experience for the participants. Qualitative case studies differ from other forms of qualitative research in that they involve the investigation of a single unit or bounded system (Merriam, 2001). In this instance the bounded system that served as the case for study is the group of teachers enrolled in the practicum.

Sample Selection. Participants were chosen from the 11 teachers of the Practicum Group. Participants were selected using a maximum variability purposeful sampling technique (Glaser & Strauss, 1967). Maximum variability sampling allows the researcher

to seek out and identify "the widest possible range of experiences and characteristics of interest for the study" (Merriam, 2001). For the purposes of this study, focusing on those participants that were either very successful or minimally successful in their practicum experience was used to inform the researcher about the attributes of the practicum experience that were effective. It was expected that those who were successful would identify portions of the experience that facilitated their success, while those participants who were minimally successful would identify weaknesses or missing elements in the experience that inhibited their success. In order to obtain a sample with maximum variability, after posting final grades the practicum instructors were asked to identify one teacher from their group who was exceptionally successful and one teacher that struggled with the practicum. This procedure yielded a pool of six teachers who served as participants for the qualitative portion of the study.

Data Sources. Two primary sources of data were used: (1) semi-structured interviews conducted with each of the six participants and (2) the practicum journals for each participant which had been archived in the Oncourse environment. Interviews were conducted by the researcher using a semi-structured interview format (Merriam, 2001). The interview protocol included questions about teachers' satisfaction with the practicum, their assessment of important components of the practicum, their perceptions of their own learning, and follow-up questions from the participants' questionnaire results (See Appendix 2 for sample protocol). Each participant was asked to take part in one telephone interview. The interviews lasted between 25 and 45 minutes. Interviews took place during the three weeks immediately following the conclusion of the course and practicum. The interviews were audio-recorded using a digital voice recorder and transcribed verbatim by the researcher for analysis. The documents analyzed for the study were produced by the practicum teachers and their peer coaches during course/practicum. They included journal entries from teachers' practicum projects,

responses from their peer coaches and instructors, answers to course evaluation questions, and reflective statements.

Procedures for Data Analysis

Qualitative data analysis consisted of the organization, sorting, and coding of data allowed for the retrieval of information and understanding of the data. A constant-comparative method (Glaser & Strauss, 1967) was used to identify themes and develop a coding scheme for the data. The researcher systematically examined the data including the interview transcriptions and documents, initially coding each data source labeling individual ideas within the data. As coding continued individual codes were sorted into categories or themes. This created an iterative process of coding and recoding the data as themes emerged.

Several steps were taken to verify the interpretations of the data made by the researcher. First, excerpts from the researcher's interpretation of the qualitative data were made available to participants whose data were represented. Those participants were asked to reflect on the researcher's interpretations and express any concerns they had about possible misrepresentation of the data they provided. Second, a peer debriefing process was utilized to check researcher themes and conclusions generated during analysis. Peer debriefing took place regularly during the data analysis. This process allowed the researcher to obtain feedback on interpretation of the data and identify other possible interpretations of the data.

Findings

Self-Assessment of Instructional Practices

The questionnaire examined teachers' self-assessment of their instructional practices related to the teaching of social skills. In order to determine if there were differences in participants' self-assessment, each group's pre questionnaire score was compared with the group's corresponding post questionnaire score using a dependent samples *t*-test (Table 1).

Table 1
Dependent Samples Self-Assessment *t*-test

		Pre	Post	Mean	Std.				
	n	Mean	Mean	Difference	Error	r	df	t	d
		(SD)	(SD)	(SD)	of				
					the				
					Mean				
Practicum		109.18	133.82	24.64					
	11	(20.00)	(14.07)	(14.72)	4.438	.678*	10	5.551*	1.674
Course		112.27	124.27	12.00					
Only	11	(19.74)	(18.15)	(11.22)	3.382	.828*	10	3.548*	1.070

* $p < .05$

The results of these tests indicated that both groups made statistically significant improvements in their self-assessment from pre to post questionnaire. The Practicum Group gained more than 24 points in their mean score, resulting in an improvement of 15% of the total possible score. This amounts to nearly a 7/10 of a point per item improvement from the pretest, from a per item average response of 3.2 to 3.9, indicating that teachers in the Practicum Group rated themselves above average. For example, on a prompt like "I can write instructional objectives for improving the social competence of my students" teachers in the Practicum Group had an average response of "undecided" on the pre questionnaire and on the post questionnaire had an average response of "agree". Teachers went from being unsure of their ability to write objectives before the practicum to agreeing that they did have the ability to write objectives after completing the practicum.

In order to determine the practical significance of the improvement made by both groups, effect sizes were computed to determine practical significance. Cohen's *d* was used to calculate the effect sizes. The effect size for the Practicum Group was 1.674. This effect size is considered a very large effect size,

indicating a strong practical significance in the difference in the scores for the practicum and course group. The effect size for the Course Only Group was 1.07. This effect size is also considered large and indicates that there is likely a practical as well as statistical significance to the improvement in scores of both groups, indicating that important gains in self-assessment were made by both groups of teachers. Although both groups made significant gains on the self-assessment, the effect sizes allow for a comparison of the gains made by each group in units of standard deviations. On average the teachers in the Practicum Group improved nearly two-thirds of a standard deviation more than the Course Only Group.

The significant improvements made by both groups suggest that both groups perceived themselves as having changed their instructional practices related to teaching social skills. That is, both groups of teachers self-reported: a better understanding of strategies for teaching social skills, improved ability to implement social skills instruction, and a higher rate of using social skills instructional strategies in their classrooms, indicating that both the course and course/practicum combination were effective. Further, these results show that teachers who participated in the practicum made greater improvements in their self-assessment of instructional practices than teachers who only participated in the TSS course. The findings suggest that teachers in the Practicum Group consistently indicated a greater change in their classroom practices related to teaching social skills than those in the Course Only Group. The results indicate that the practicum experience was an effective means to facilitate teachers' change in instructional practices.

Critical Practicum Components

The qualitative analysis generated three broad themes that represent the critical components of the practicum experience: (1) the use of meaningful instructional activities that are based in real world practice, (2) the presence of supportive learning and teaching community, and (3) structured experiences linked to course content.

Meaningful activities. The use of "real life" and meaningful learning activities (Howard, 2002) to facilitate teacher learning was the first component of the practicum that the analysis revealed. Perhaps the use of practical learning experiences should be self-evident in a "practicum" course. The finding suggests that the use of meaningful learning activities made an impact on teacher learning. A meaningful learning activity is one that is relevant to the teachers' real life context. The practicum activities worked to create links between the environment the teacher is working in and the context of their learning. These activities were embedded in the teacher's daily tasks and required continued engagement in the ongoing practicum project. This seems to promote a deeper understanding of concepts and content. It is through their active engagement that teachers can change their instructional approach and try new teaching practices as well as reflect on their professional experimentation.

"It [the practicum experiences] just helped you see the whole process. And I think just putting the whole thing into practice. If I hadn't, if I had just written all this narrative out and I had never applied it, and never actually went ahead and carried it through then I would never have seen the benefits of all that either. I think you have to have the carry through where you actually apply it and see what happens. You have to see the whole process; if you don't see the whole process you're probably not going to see the benefit of it." (I4:12-13:16-2)¹

Participants consistently emphasized that it was the *doing* of the activities that was beneficial. And that providing opportunities to learn from their own "in classroom" experiences was very important.

Teachers particularly appreciated opportunities to implement

¹ Quotations are identified with codes as follows: (Participant:Transcript Page: Line Numbers), e.g. an identifier (I1:2:3) indicates that the quotation is from participant1, page 2, line 3 of the transcript.

"new" practices. The practicum focused on practices related to assessment and instruction of social competence in school age children. Being exposed to new ideas was one part of the learning experience. They further suggested that the exposure to these new practices and strategies was enhanced by the opportunity to "try out" the approaches in a real setting.

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Teachers frequently included in their descriptions of their student's success some indication of how valuable it was for them to see student progress during the practicum. For example, one teacher described the excitement of seeing a student use the strategy she had been working on with the student to help him maintain his personal space as part of her practicum.

"You know the technique I started to use the, 'you pop the person's balloon'. So, he started to use it, saying, don't come too close, you'll pop my balloon'. So one day I approached him really close intentionally and I started to talk to him and he said, 'You just popped my balloon!' So, I was really happy, because he really remembered." (I6:9:3-7)

Another teacher described an informal opportunity where she had "accidentally" observed her student using the skills she had been working on as part of the practicum.

"Perhaps I was more successful than I realized. As I was leaving, the other residents about the student's age were going to dinner. She waved to them and asked them to wait for us. She introduced me to each one and told me about each one's favorite food. It is the first time I have seen the

student comfortable with peers. " (J5:3:3-8)

Having the opportunity to observe first hand the power of the techniques that were being taught in *their own* classrooms with *their own* students helped teachers evaluate their learning and their ability to use these instructional strategies.

In addition to the impact of the practicum for teachers, it seems teachers appreciated opportunities to implement new practices that helped their students. Another benefit of using meaningful activities to support teacher learning was that as teachers engaged in meaningful activities, they were able to observe salient outcomes of the experimentation and draw new conclusions about the effectiveness of their current practice and experimental techniques. Most practicum experiences provide teachers with new experiences, but most do not facilitate opportunities to intentionally improve student behavior. Meaningful activities should impact student learning and behavior as well as engage teachers in trying out new instructional strategies.

Supportive on-line learning community. The second component of the practicum that emerged from the analysis was the importance of receiving support from the learning/teaching community involved in the practicum. Different learning communities played equally important roles in enabling the teachers to try new strategies and engage their students in new ways. Three main sources of support were described by the participants: (1) peer support, (2) instructor support, and (3) local school and site support.

The on-line learning communities that were established as part of the course and practicum provided a basic site for those enrolled in the course and practicum to provide peer support for one another. In these small groups (1 practicum teacher and 3-4 peer coaches), practicum teachers had the chance to share their plans and ideas as well as receive feedback on those tactics and their results. The establishment of a learning community where they could share ideas and learn from one another was the first

thing that teachers valued about these on-line learning communities.

"I really enjoyed going through and reading everybody else's case studies and what they were doing and that, because I'm in the severe to moderate population I feel like I'm so isolated, and in the school I don't really know what other people were working on, so the people that were in resource rooms or MIMH [Mild Mental Handicaps], I found it a learning experience just to read their stuff. And I like doing that, to know what they were working on and know what kind of issues they had to deal with in their room. So, I found that a good learning experience." (I2:10:11-17)

This teacher was not alone in her belief that the practicum groups helped alleviate the feeling of isolation that can sometimes overwhelm teachers.

"I like getting the feedback from the people. I liked that because then I feel like I'm not all alone." (I1:13-14:23-3)

Many other participants also focused on the importance of the feedback they received from their peers. Feedback took a number of different formats. Some participants reported that getting feedback from their peers helped them to generate new ideas and refine their plans.

"And then the responses of my practicum group in general, at least my group in particular, they were great. They were awesome. They were all girls that taught different students like mine, some very different, some had autism and a lot of kids like that they dealt with, but they all responded and gave me great ideas." (I4:4:13-16)

Teachers also reported that their peers played an important

role in helping them to stay motivated. These "cheerleading" responses often encouraged practicum teachers that they were heading in the right direction and seemed to serve to help teachers persevere through the long process of completing the practicum project.

"Having feedback from mentors really helped me too. I happened to have really good mentors who took interest in my profile student, so that helped steer me on with more ideas. Having this mode of communication helped me stay motivated too." (E3:1:5-7)

A drawback that several participants identified in this type peer group interaction was the lack of consistency within some groups. Of course, each peer group was unique and some functioned better than others in their capacity to support learning. Often responses from mentors would be different in both the quality and the quantity of the feedback given to the practicum teacher. One of the participants described specific problems with inconsistency among her peer feedback.

"Because it varied somewhat [feedback], and there were some people who wrote books and gave just amazing information, and then there were other people, you know that they wrote just because they had to. So there were always a couple that in all honesty I read first, and I read a lot more carefully. Then after the first 5 or 6 weeks the others came when I had a chance. Let's put it that way. I had one [mentor] that was amazing. And then I had a second that offered very good practical advice" (I5:5:5-9)

Teachers had to be comfortable expressing ideas and giving meaningful feedback to one another for the support to have an impact. One practicum teacher explained that her group had a "reciprocal relationship" (I1:14:2-3). That is, each member of the group contributed something and in return gained a better

understanding of the information being discussed. Such a relationship seems to be the perfect description of a peer learning community. Participants in the learning community can share ideas, get feedback, and refine their teaching practices in a reciprocal way.

A second source of support came from the practicum instructors. Practicum instructors were expected to supervise the practicum teacher as they progressed throughout the semester-long project. They supported the teacher by giving feedback, as well as providing guidance and constructive criticism. Instructors provided a different type of support for the participants. It appears that practicum teachers wanted feedback from instructors and expected the instructor to serve as a guide during their practicum experience.

"You [the practicum teacher] kind of want to have feedback. For a while there she [instructor] didn't give me any feedback and then I thought "oh well maybe she just wants this to be more a little independent". I just kind of took it that way. I figured well if I don't hear too much from her it must mean I'm doing ok. I work well with criticism, but I don't want only criticism. If a professor or instructor, that's all they do, just critique "well you didn't do this" and "what about that" then after a while it starts getting kind of bad for me. I like criticism to be in such a way that it's not obvious that they're criticizing me...I don't know if you know what I'm talking about, but like saying "I recommend these methods" and being very tactful. [My instructor] was very tactful in what she said. She was very smart, and so I respected that. Like I said she didn't give an enormous amount, but then again I think she would have gotten on my nerves if she would have kept intervening and saying "correct this" and "you have to do it that way". I think I'm at a level that I don't really need "that". I just want guidance and her to kind of facilitate me along. That's not direct me and...she was good. When she

spoke it was something valuable, when she didn't I figured I was ok." (I1:12:4-18)

It appears that the complementary roles of encourager, critic and guide defined the support role of the instructor as a crucial one. In order for a teacher to have a successful practicum experience, the instructor must carefully guide the teacher, give an appropriate amount of feedback, and help teachers to see themselves implementing best practices for their students. Clearly, instructors needed to provide active support for their practicum teachers and help individualize the practicum experience to meet the individual needs of the practicum teacher.

The third source of support identified in this analysis was support from the teaching setting. In the design of this practicum experience little consideration was given to the actual settings in which the practicum projects would be carried out. Unlike a typical undergraduate practicum, where classrooms are particularly chosen and the local school sites are very involved in supporting pre-service teachers during their field experience, this practicum format for in-service teachers assumed that teachers would implement the projects in their own current classrooms, or in classrooms in which they had ready access. Consequently, the level of support teachers received from their colleagues within their sites varied considerably. The level of support received from within the site emerged as an important component of a successful practicum.

"I had to be more creative in my problem solving here, and I feel that I was successful. One thing I did was involve other teachers, not just the resource teacher, into my plan. This was very positive for me and educational. I would definitely involve more teachers in my next intervention plan. I would seek out teachers that are open to lending ideas and their own expertise." (J1:3-4:21-2)

Participants often repeated this theme and the importance of

collaboration at their school sites. Some found colleagues at their sites were less willing to support them as they worked to implement their practicum project.

"I want to do this, and I especially want to help my student, but how can I do this when this licensed teacher over here is saying sorry but things aren't gonna change today. This is the way things are going to be in this classroom. I kind of felt like I had to go and do backwards somersaults to get the assignments done the way I wanted them." (I1:9:14-18)

Others were able to work in supportive environments with colleagues that would not only avoid hindering their work with the student, but became actively involved in the practicum teacher's project.

"The student's classroom teacher worked closely with me throughout the intervention. She would share with me anecdotes and incidents that happened in class when I could not be there. She would tell me of situations when the student's communication skills improved or deteriorated with classmates. Her support was invaluable." (J5:1:15-18)

An emphasis in participants' ideas about the importance of collaborating with others was the sharing of responsibility for the student. Nearly all the participants expressed that completing a successful intervention of this type requires the involvement of other teachers at their school, thus it appears that having a supportive learning/teaching community proved to be critical to the participants' success. All three sources of support: (1) peer support that includes feedback, idea sharing, and encouragement; (2) instructor support that provides an individualized level of feedback and guidance; and (3) school site support from colleagues who professionally share responsibility for managing student behavior.

Practicum Structure. The final component of the practicum that was identified by the qualitative analysis was the infrastructure of the practicum design itself. That is, the framework, layout, and scaffolding embedded in the design of the practicum project seemed to facilitate participants learning as they worked on the practicum project. One way to look at the structure of the practicum is that it provides an on-line "classroom environment" for all of the learning that takes place during the experience. This structure helps regulate timelines, maintain order, provides cues about expectations for learning, and sets the stage for teachers to embark on their practicum experience. Participants acknowledged the structure of the practicum and reported the format helped them manage the myriad of practicum tasks.

"It helped me to discipline myself by doing those little steps" (I1:1:16)

* * * * *

"I liked journaling. It kept me on track with the class; like I was forced to follow a timeline." (I2:7:15-16)

The structure seemed to provide a reasonable format for teachers to follow and helps them maintain a schedule, discipline themselves to complete tasks, and maintain consistency in their work on the project. Similarly, the practicum structure also aided students in their organization.

Participants also mentioned the utility of having exclusively written communication with their group that was required to facilitate the practicum on-line using Oncourse. They appreciated the written record of their communication and the efficiency of having written out their ideas and receive written feedback.

" [When it's written] then you remember what the people said. You can't always remember if you're talking. Also when

people write, they're going to write more important things." (I1:6:10-12)

* * * * *

"It kind of makes the communication very efficient and keeps the communication. You can kind of go back and say "now what did she say again?" and "what is he talking about?" (I1:6:15-17)

This recorded communication was important, as it allowed teachers, peer coaches, and instructors to return to previous steps in the generally linear process of the practicum experience for reflection. One could compare the consistency of a teachers plan with their reports of the actual experiences of implementing the plan. Further, changes in the mindset and understanding of teachers were documented as the practicum experience progressed, allowing them to keep track of their learning throughout the process.

A final facet of the practicum that appears to have contributed to ways in which the practicum impacted teacher growth was intentional linking of the practicum and course activities. Teachers consistently expressed their feelings that having a practicum experience that was tied so closely to the material they were studying in the course provided a more in depth learning experience. Likewise the use of an on-line delivery format for both the course and practicum seemed to facilitate participants learning.

Effectiveness of the Practicum

Data gathered in both the quantitative and qualitative phases of the study suggest that the practicum did affect teacher instructional behavior. The effectiveness of the on-line practicum is further validated by the qualitative results. Teachers enrolled in the Course and Practicum Group consistently reported their own instructional changes in interviews and journals. Changes that were described ranged from simple procedural changes to changes in philosophical approaches to

teaching. One example of change was a teacher who explained that she had learned strategies for being delivering cues and prompts to her students as part of social skills instruction. She learned to be unobtrusive and watch both the target student and his peers during an observation, while still being able to communicate non-verbal prompts to the target student. The use of this procedure was a big change for her. Previously she had always assumed to really understand what was going on she needed to be very close to the students, delivering cues and prompts while sitting immediately next to the student. With skills learned in the practicum she was able to be more efficient and obtain more reliable observations of her students' social interactions.

"You know, that I'm sitting in the back of the room now, and I'm trying to get him to cue in to what's going on at the table. So, that changed my teaching. I think that 'ok we don't have to sit right next to them' ".

(I2:10:5-7)

Another participant described a change in their philosophy of teaching that will impact her instructional practices. She gained a new understanding of her role as a teacher, taking responsibility for the social skills instruction of her students as well as their academic improvement.

"So, I can't just expect them to walk in to my classroom and sit down and behave properly. You know, I have to look at them and say, ok maybe there's something we need to work on, but I'm not just going to snap at them and say "quit doing that", which is a lot of times what teachers do is just look at students and say "stop that, don't do that", but we don't take the time to show them what they should be doing." (I4:11-12:20-2)

These self-declarations of new understandings of the importance of social skills instruction are important, but it is

difficult to know if teachers *really* did change their instruction to reflect the new concepts, strategies, and skills they learned in their course and practicum experience. Their substantial positive change in self-assessment scores suggests that they perceive that they are able to make or have made changes that reflect the instructional practices taught in the course and practicum.

Some evidence that teachers have made changes in their practice and are using the strategies exists in their descriptions of their own future plans. Each practicum teacher interviewed described their future plans for using the knowledge and skills they gained with future students. One teacher put it broadly saying:

"I felt this intervention was successful and will continue to offer social skills training and interventions. I have learned that many students can benefit from the social skills curriculum." (J2:3:7-9)

Others had specific plans to continue working on the instruction that they developed for their student during the practicum after the official end of the practicum experience.

"I am hoping at this point that <student> will continue to make progress towards my criterion levels as I get to have time with <student> to work in the actual recess setting itself. I plan on continuing my planned interventions with <student> and monitoring his improvement as he gets more practice in the setting." (J3:2:20-23)

Some even described plans to keep working with their practicum student into the next school year.

"I plan on focusing still on <student> in the fall and I have a feeling that over the summertime she may have backtracked some. So we'll probably use some of the same techniques to get her going again and just keep following

through with that then see where else she needs to go. But I want to do the same thing with other students, especially the ones that I see struggling the most. You know, pick those kids out first and I've got a few in mind already for next year so...they're a target...a good target. And I will use these things again, definitely." (I4:2:13-10)

The final quote is perhaps the most encouraging description of a teacher planning on using the strategies from the course in her future classroom to teach social skills. She clearly was already envisioning herself using the tools she learned in the course to work with students she thought would benefit from the instruction. The concepts and strategies have carried over from her target student to her other students and impacted her instructional practice. Qualitative examples such as these support the data from the self-assessment and suggest that the practicum experience did affect teacher's classroom practices. Based on the findings, this format of on-line practicum seems to be an effective way to facilitate professional growth for in-service teachers.

Implications and Conclusions

The findings from this study show that the use of a linked on-line practicum and course was an effective means to promote professional growth for the teachers. The success of the practicum and course combination implies that use of this and similar instructional strategies may enhance teacher education instructional practices. Aspects of the practicum identified in the findings proved for the most part to be an effective means to facilitate teacher change via an on-line course/practicum experience. Indeed the results from this study have several important implications for design and delivery of on-line practicum experiences for in-service teachers:

- (1) The use of a project-based practicum provides needed structure and facilitates reflection by practicum teachers.
- (2) Practica and course work that are integrated provide

valuable opportunities for teachers to engage in professional experimentation that can lead to teacher change.

- (3) Collaborative learning communities can serve as important support systems for teachers completing a practicum experience.

Use of Project-Based Practicum

In this study, the project-based practicum structure facilitated teacher change. The step-by-step organization of the practicum tasks provided a plan for professional experimentation, giving teachers organized opportunities to try out strategies learned in the course. Teachers reported that the project helped them stay consistent and organized as they implemented the new instructional strategies. Project-based practica should include a step-by-step series of tasks that provide teachers organizational support as well as opportunities to implement practices and observe salient student outcomes.

The structure of the practicum project facilitated opportunities for teachers to observe "real" student outcomes. Often teachers involved in traditional practicum experiences may have a chance to "try out" new instructional techniques, but rarely do they have the chance to observe the salient outcomes for the students they "tried out" the techniques on. However, the project-based practicum experience in this study provided opportunities for teachers to do both. Teachers benefited from the opportunity to observe and report positive student outcomes that resulted from implementation of the practicum project. Teachers were encouraged by the positive results of their projects and their success impacted their instructional practice. Thus, practicum projects should create a means for teachers to observe the outcomes of their new instructional practices so they can see specific results. The outcomes for the target students can then strongly influence the teacher's attitude toward a technique and increase the likelihood that a teacher will continue to experiment with the strategy.

Documenting teacher education outcomes at the student level

is important for both teachers in training and teacher educators. Teachers benefit from seeing student improvement and learn from experiences where students' outcomes are not improved. Teacher educators are currently being challenged to use student outcomes as a measure of the effectiveness of teacher education programs and instructional activities (Sparks & Hirsh, 1997). Although the myriad of variables that affect student achievement make measuring student outcomes a challenge, nonetheless should continue to be a goal for teacher education researchers. The goals of teacher education must continue to be threefold:

"change in the classroom practices of teachers, change in their beliefs and attitudes, and change in the learning outcomes of students." (Guskey, 1986, p. 5)

Using project-based tasks to integrate field experience into on-line courses and support teachers in their professional experimentation holds great promise.

Integrated Course and Practicum Experience

The second implication for the design and implementation of in-service teacher education practica is the benefit of integrating course and practicum experiences. In this study the practicum and course were integrated on a week-by-week basis, requiring teachers to immediately implement concepts and strategies taught in the course. Previous research has suggested that linking course activities to field experiences can enhance their effectiveness (Slavkin, 2002). However, the integration of the course and practicum in this study was on a different level. The practicum tasks were more than just occasional assignments; they were weekly tasks designed and implemented in a complementary manner and required professional experimentation and reflection.

Teacher educators should strive to ensure the practicum experiences provide direct links to concepts from courses. Practicum experiences should be developed with course objectives in mind, and similarly course activities should facilitate the implementation of strategies in practicum settings.

Collaborative Learning Communities

The third implication concerns the use of on-line collaborative learning communities to support teachers engaging in practicum experiences. The collaborative learning communities in this study were established as part of the practicum and served primarily as a means for teachers to reflect, obtain feedback, and document the progress of professional experimentation. The collaborative learning communities that were part of the practicum provided a link between the course and practicum activities and facilitated reflection. These learning communities gave numerous opportunities for teachers to reflect on their understanding of course concepts, their implementation of new teaching strategies, and the observed outcomes of the students targeted by their projects. The findings from this study suggest that several different facets of the collaborative learning communities can provide valuable support for practicum teachers.

One facet is the use of peer coaching to support practicum teachers. The use of peer coaches helped support completion of the projects by providing encouragement and feedback throughout the practicum experience. Previous research also supports the use of peers to support teachers (Knapczyk, Frey, Wall-Marencik, 2005; Knapczyk, Hew, Frey, & Wall-Marencik, 2005; Wenzlaff & Wieseman, 2004, McLeskey & Waldron, 2004; Howard, 2002, Manoucheri, 2002). However, use of peer coaches should be monitored closely and guidelines should be provided for peer coaches. Likewise, the expectations for the peer coaches should be clear and consistent throughout the practicum.

A second facet of using learning communities as part of a practicum experience is the instructors' contribution to the community. Clearly some form of instructor involvement in the practicum is needed. However, the results of this study do not make clear that any prescribed role will work for all practicum situations. Rather instructors need to assess the needs of each practicum teacher and make individual judgments about the level of support the teacher requires. Based on the findings from this study, instructors should provide more feedback in the initial

stages of the practicum and solicit feedback from the teachers regarding the ways in which they can best support the practicum teachers.

Although the study's findings demonstrated that the use of on-line learning communities can be a valuable tool in supporting practicum experiences, there is still need for greater understanding of their impact on teacher professional growth. Research is needed to continue to help refine instructional strategies for defining instructors' roles and providing appropriate feedback to practicum teachers within learning communities. Similarly, finding ideal roles for peer coaches should be explored. Strategies are needed to utilize more of the potential that peer feedback holds as a support for the practicum teachers. Collaborative learning communities seem to hold vast potential for supporting in-service teachers during a practicum experience, but more research is needed to determine instructional activities that effectively involve learning communities that facilitate teacher professional growth.

Facilitating Practica On-line

A final implication concerns the facilitation of practicum experiences in an on-line environment. The ability for teacher education programs to find effective means to deliver practicum experiences via distance education could greatly impact the structure of current teacher education for in-service teachers. If research continues to show that on-line delivery of practicum experiences is effective, it may encourage teacher education programs to use this format to facilitate practicum experiences, and will allow teachers working with limited licenses greater access to teacher education programs. Teacher educators and colleges of education should be encouraged to continue exploring the utility of on-line delivery of courses and practicum experiences.

Conclusion

In conclusion, teacher educators should continue to work to design on-line instructional activities, including practica, which lead to teacher change. Providing practicum experiences

that positively impact teachers' ability to implement research-based practices should be a goal of all teacher education programs. It is clear that providing "real life" opportunities to explore new ideas and try new instructional strategies is one crucial role that practicum experiences play in teacher education. The integration of on-line practicum experiences with coursework holds great promise as means for facilitating teacher change.

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Appendix 1 - Sample Questionnaire

Welcome to K522 Teaching Social Skills, this survey asks you to report information about your understanding of social competence and teaching practices related to social skills instruction. Please take a couple of minutes and complete the survey for us. Thank you very much. (A) Please tell us a little about yourself.					
A1. Gender	Male	Female			
A2. Age	18-25	26-35	36-45	46-55	56+
A3. Please indicate whether you are enrolled in K422 or K522.	K422	K522			
A4. Please indicate the number of years of teaching experience you have in a special education classroom.	None	1 year or less	2-4 years	5-10 years	11 or more years
A5. Please indicate the grade level of students you are teaching in your primary teaching assignment.	Grades K-5	Grades 6-8	Grades 9-12		
A6. Please indicate the primary reason you are taking K422/K522. You may indicate more than one reason.	Try an on-line course	Convenience	Required Course	Need for license renewal	Other
A7. If Other, please specify:					
A8. Please indicate the type of teaching position that describes your primary assignment in your current job.	Self-Contained - Sped.	Inclusion - Sped	Teaching Assistant	Gen. Ed. Teacher	Full time student
A9. If other please specify:					
A10. Are you enrolled in the K595 practicum in special education associated with this course?	Yes	No			
(B) Please tell us about your experiences with social skills instruction and your current teaching practices. Please indicate how much you agree or disagree with the following statements, unless stated otherwise:					
B1. I identify the social expectations I have for my students.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
B2. I identify the social expectations that same age peers and classmates have for my students.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
B3. I understand the relationship between social competence, academics, and other areas of school success.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
B4. I can explain to others the impact that social expectations have on classroom performance of students.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
B5. I can develop a systematic assessment of social competence for my students if needed.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
B6. I can conduct a systematic assessment of social competence for my students if needed.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
B7. I can interpret the results of social competence assessments accurately.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
B8. I can appropriately prioritize and target social skills for instruction.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
B9. I can summarize the results of social competence assessments.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

B10. I can write instructional objectives for improving social competence of my students.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
B11. I can design effective lessons that teach social skills.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
B12. I can design an effective monitoring system to evaluate the teaching of social skills.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
B13. I can critically evaluate materials that focus on social skills assessment, curriculum, and instructional activities.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
(C) Indicate how often you complete the instructional practices related to the teaching of social skills with your students.					
C1. I define the social expectations of the setting my students are in.	Always	Often	Sometimes	Rarely	Never
C2. I take into consideration the impact of my students' level of social competence when designing subject matter instruction.	Always	Often	Sometimes	Rarely	Never
C3. I conduct systematic assessments to determine the social competence of my students.	Always	Often	Sometimes	Rarely	Never
C4. I use the results of social skills assessments to develop instructional lessons.	Always	Often	Sometimes	Rarely	Never
C5. I plan lessons that focus on specific target social skills needed by my students.	Always	Often	Sometimes	Rarely	Never
C6. I implement interventions that focus on the social skills needs of my students.	Always	Often	Sometimes	Rarely	Never
C7. I evaluate the progress of my students in interventions that focus on improving their social competence.	Always	Often	Sometimes	Rarely	Never
C8. I systematically monitor interventions that target students' social skills needs.	Always	Often	Sometimes	Rarely	Never
C9. I integrate the teaching of social skills into my academic instruction.	Always	Often	Sometimes	Rarely	Never
C10. I work with other teachers to systematically promote social skills instruction in my school.	Always	Often	Sometimes	Rarely	Never
D) Please assess your current knowledge and skills related to social competence instruction compared to other teachers in your school or school corporation.					
D1. My skills related to systematically assessing the social competence of my students are...	Excellent	Above Average	Average	Below Average	None
D2. My skills related to developing social skills curriculum are...	Excellent	Above Average	Average	Below Average	None
D3. My ability to develop appropriate social skills instruction is...	Excellent	Above Average	Average	Below Average	None
D4. My ability to identify the social skills my students need to participate effectively in classroom activities is...	Excellent	Above Average	Average	Below Average	None
D5. My ability to identify the social skills my students need to interact with peers in informal situations is...	Excellent	Above Average	Average	Below Average	None
D6. My ability to prioritize the social skills instructional needs for my students is...	Excellent	Above Average	Average	Below Average	None

D7. My ability to implement appropriate social skills instruction for students is...	Excellent	Above Average	Average	Below Average	None
D8. My ability to effectively monitor a social skills intervention is...	Excellent	Above Average	Average	Below Average	None
D9. My ability to work with my colleagues to plan social skills instruction in my school is...	Excellent	Above Average	Average	Below Average	None
D10. My ability to consult with my colleagues to show them how to teach social skills to their students is...	Excellent	Above Average	Average	Below Average	None
D11. Overall my skills in teaching social skills to students are...	Excellent	Above Average	Average	Below Average	None

Appendix 2- Sample Interview Protocol

Sample Semi-Structured Interview Questions for Teacher-participants

Having successfully completed the practicum, what do you think the most beneficial part of the practicum experience was?

Overall, how do think the practicum benefited you during this past semester?

How do you think the practicum experience benefited or will benefit your students?

What outcomes did you notice for your students?

What are some of the things that worked well in an on-line format? What didn't work well? Why?

What things do you think are critical to the success of an on-line practicum?

How do you think the on-line format of the practicum would compare to a traditional practicum?

What kind of things could be done better in the practicum and why are those things important?

As you look back on the practicum what activities were most successful?

Did you notice changes in the way you worked with students and taught during the practicum (in your teaching practice)?

If you had to list the three most important parts of the practicum that facilitated your learning what would they be? Why?

Additional questions referred to specific information from teachers work during the practicum. (e.g. I noticed on your final reflection you said this...what kinds of things led you those conclusions?)