Using Tablet PCs in Social Work Practice Education

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ABSTRACT

Within social work practice courses, video recording has been used to record and evaluate the clinical practice skills of students. This process has been limited by labor-intensive, tape-based video equipment, non-digital means of organizing and assessing specific scenes and events within the video, and paper evaluation forms. As an interdisciplinary project, professors from professional disciplines (education, social work, and counseling) worked with information technology students from computer science to design and develop Table PC-based OneNote EVAs (Extended Video Application) that would provide a more effective way of evaluating clinical practice skills for professional program students. This case study presents how one interdisciplinary team was able to create an EVA for use with digital recordings of clinical practice skills so that these demonstrations could be recorded, organized, and evaluated more effectively. The issues of working through communication differences, design difficulties, and the additional steps toward implementation are explored. The lessons learned from working as an interdisciplinary team and the impact of Tablet PCs in social work practice courses is also presented.

Keywords: Tablet PC, social work, interdisciplinary, application, technology

1. INTRODUCTION

Radford University adopted Tablet PCs for use by its faculty and its 9,300 students in 2004, and the entire campus became completely wireless that same year. Since then, faculty members have applied this technology in many ways to stimulate student engagement and learning.

In the professional fields of education, social work, and counseling, the learning of clinical practice skills has been reviewed and evaluated via video taped sessions. Of late, video use within clinical practice courses has been limited by labor-intensive, tape-based video equipment and non-digital means of organizing and assessing specific scenes and events within the video. Evaluation instruments were often simple paper charts, making the creation of a useful data base difficult. Since the introduction of Tablet PC's at the university, faculty members have been using digital video equipment to capture and analyze these instructional sessions instead of using video tape. Unfortunately, the existing system has several limitations. For example, the synchronizing text to video segments and providing nonlinear access to specific points within recorded sessions were problematic, as were various evaluation instruments and organization and data storage issues.

Fortunately, many computer science (CS) courses have been moving toward project-based learning environments, particularly instructional opportunities in which information technology (IT) students work with those in other fields to develop solutions to real problems. Given the difficulties that education, social work, and counseling were having in using the Tablet PC's with digital video, an interdisciplinary project was proposed. A collaborative effort between IT students and faculty from counseling, social work, and education was started to work together as teams to find solutions to the video-related problems of synchronization of text to video and organization and evaluation issues.

This interdisciplinary project would ultimately involve designing, implementing, and evaluating a new method for managing digitally recorded practice sessions of students using Microsoft's OneNote on Tablet PCs. It was hoped that a Tablet PC-based OneNote EVA (Extended Video Application) would improve the effectiveness of specific clinical learning experiences for these professional programs, enhancing the use of digital technology in practice-oriented training. This first phase, to design useful software specific to each professional program, was completed in Spring 2006.

This paper summarizes the experience, framed in the form of a case study, of working as an interdisciplinary team member to develop the Tablet PC-based OneNote EVA. Both the essential similarities and the critical differences among educator goals and student understandings are explored. The communication differences, the design difficulties, and the steps toward implementation are presented. Likewise the lessons learned in the creation of Tablet PC software specific to a professional program's needs, working as an interdisciplinary team, and the impact of Tablet PCs in social work practice classes are also presented.

2. CASE STUDY SYNOPSIS

The overall goal of the project's first phase was to design a Tablet-PC based software application that can be used to evaluate clinical learning skills in education, counseling and social work. The desire to switch from tape-based, non-digital and labor intensive video to PC-based digital recording with customized data recording and evaluation screens was the driving force for these disciplines to join the IT students on interdisciplinary teams. Each team was to develop an OneNote EVA (extended video application) that would allow faculty to easily and

quickly review video-recorded student clinical practice skill sessions and then assess and evaluate those skills by both student peers and by the faculty member. A team of three Information Technology (IT) undergraduate students, as part of their ITEC 495 capstone class, were assigned to work with a faculty member from education, social work, or counseling who was interested in improving and developing OneNote for use in clinical practice graduate courses.

The objectives agreed upon by all stakeholders were: to broaden the capabilities of the Tablet PC and OneNote by expanding video fidelity and text video synchronization; to have immediate access to specific points within recorded sessions; and to develop customized data recording and evaluation screens. The design team in this case study was assigned to work and interact with the social work stakeholder to establish both the look and feel and the functionality of the proposed application. The prototype was built during phase I (Spring 2006) for testing and refinement, followed by full classroom implementation in phase II, targeted for Fall 2007.

2.1 Communicating

The team first needed to research the technical issues and their resolution. The IT students were required to meet periodically with the social work faculty stakeholder to discuss what was needed from the OneNote application to help define the data recording and evaluation aspect of the project. Similarly, the social work faculty stakeholder needed to understand what was possible in order in developing the EVA in order for the IT students to develop a realistic and useful design.

For the IT students participating on the design team, understanding what clinical practice skills needed to be assessed in a social work practice class was a new experience. Understanding and communicating both the behavior needed from the desired product and the reasons for the need turned out to be quite difficult. The student team had little notion of social work clinical practice skill sets. For example, social work students must display competent interviewing skills such as establishing report, good listening skills such as reflective listening, and appropriate verbal and non-verbal communication. They must also demonstrate cultural competence, development of treatment plans, and intervention strategies within the interviewing process. In a similar way, the faculty member from social work had minimal understanding of OneNote's capabilities. Trying to balance what was desired or needed by the faculty member with what is possible in the design was difficult given the two very different fields of study. The students were often in a position of having to simplistically explain what can be a complex understanding of program and computer capabilities. It was also intimidating for the IT students to communicate with the social work faculty member, given the power differences between students and faculty.

Overcoming these communication difficulties is a common obstacle for interdisciplinary teams. The team needed to slowly work through these communication difficulties to come up with mutually agreed upon specifics for the EVA. Ultimately, the team was able to establish a good working relationship and gather a list of comprehensive requirements for the EVA.

2.2 Designing

As a professor and faculty stakeholder, the realization that the student team could better understand what was needed through a more concrete example was one way to address the communication difficulties. How those required elements should look for the evaluation instrument needed to be mutually explored. The faculty stakeholder researched clinical practice skill sets and evaluation formats for clinical skills within social work education [5, 6, 10, 11, 12]. While this is a critical component of social work practice education, there is great variance in defining the necessary components of good clinical practice and few evaluation models, let alone examples that use technology. The faculty stakeholder finally created a "blueprint" for the evaluation screen design to visually communicate what was needed. By making a paper mock up of the visual screen for the IT students to use as a model, the social work faculty member became a contributing member of the team and not just a "client" requesting a service and providing some parameters. That "blueprint" is provided as an example in Figure 1.

Once the model of the screen design was understood, other design considerations needed to be considered. In doing so, assumptions and constraints had to be addressed. The designing of the OneNote EVA presented several difficulties. The IT students were not particularly familiar with OneNote because they had not used it in any of their courses, nor did they have the prior opportunity to study it. Like many non-IT individuals, the faculty stakeholder assumed that all IT people were familiar with all kinds of software or had some experience using most software.

This assumption was dealt with by both the IT student team and the faculty stakeholder by each researching design possibilities. While the IT students researched the capabilities via manuals, on-line help resources, and other such avenues, the social work faculty member research in a way that she could understand – by talking with other faculty members from the other disciplines who had used OneNote and seeing what it looked like to use it. In this way, both the IT students and the faculty member both contributed to researching the design possibilities in a way that made sense to them.

The team then needed to deal with the constraints of the project. The IT students needed to figure out a design that not only met the requirements that the faculty member laid out, but also needed to do it in a way that a less technologically savvy professor could use it easily. While the team leaned toward multiple buttons and screens, the faculty member preferred simplicity and ease. Even the size of the screens and font had to be debated and compromised. After several meetings and sketches or blueprints, a model for the evaluation screen that was mutually agreed upon emerged. The students developed a reasonable design based on the "blueprint" for implementation. An example of the final evaluation screen is provided in Figure 2. The IT students also worked on the audio and video synchronization with notes, other input options, and data entry in OneNote.

Thus, the objectives were achieved in creating a design for the EVA. Video fidelity and synchronization was improved and expanded and the customized data entry for student info and evaluation screen was completed as well. This evaluation screen provided for both hand written notes using the Tablet PC pen and typed data entry.

Interviewing Skills • Reflective Listening •Verbal and non-verbal communication • Professional Use of Self	Poor listening skills; hindering of information gathering; assumptive attitude; giving of advice C− C C+			Fair listening; attempt to gather information; expression of sympathy B− B B+			Reflective listening; focus on factual information gathering; expression of empathy A− A A+			
	1	2	3	4	5	6	7	8	9	
Cultural Competence • Self awareness of clinician's own culture • Sensitivity to diverse cultural values and constructs • Proficiency in cross cultural communication	Insensitive to client's cultural values; judgmental attitude; imposition of ideas			Recognition of cultural differences; awareness of power differentials and oppression; ability to discern client's values			Respect for client's cultural values; ability to elicit and affirm cultural identity; professional judgment formulation			
	1	2	3	4	5	6	7	8	9	
Knowledge and Intervention Strategies • Assessment of client's needs • Develop mutually agreed goals • Set priorities and partialize steps for goal attainment • Demonstrate use of different models	Unaware of client's needs; lack of self direction; setting of impracticable goals			Awareness of client's expressed needs; limited use of practice models; attempt to develop goals for client			Ability to address client's immediate needs; reframing and empowering client through eclectic practice models; clarification of goals and partialization of steps for attainment			
	1	2	3	4	5	6	7	8	9	
Evaluation • Identify indicators of client's total quality of life • Timely closure, termination of referral	Failure to assess client's quality of life; inability to monitor progression of change; failure to identify indicators for termination or to make a referral			Awareness of client's prognosis and the indicators for quality of life; postponement of closure, termination or referral			Acknowledgement of client's progression of change; ability to make timely closure, termination and referral			
	1	2	3	4	5	6	7	8	9	
Meta Competence • Ability to recognize one's own performance and level of clinical competence	Inflated assessment of, or underestimation of, one's own performance and clinical competence			Appropriate assessment of one's own clinical performance and competence			Identify specific processes; recognize the dynamics of interaction with the client; aware of how to improve			
	1	2	3	4	5	6	7	8	9	
Overall Evaluation										
	1	2	3	4	5	6	7	8	9	

Figure 1: Paper "Blueprint" for Evaluation Screen

2.3 Moving Toward Implementation

Once the design issues were resolved, the IT students needed to create a full visual model. It was crucial for the social work faculty member to assist the IT students in creating this visual model in light of the communication and design issues noted previously. This again forced the faculty stakeholder to prioritize all of the capabilities that were "wished for" as it was not going to be possible to have all needs met given the limitations of the software, space considerations, and the abilities of the IT students.

In moving toward implementation, other issues also emerged. For example, the faculty member needed options for saving the data as a file on a personal computer and/or to the network server. This was needed to address possible future confidentiality issues. Social work has ethical considerations and standards for use of technology in the social work field that is required by the National Association of Social Work (NASW) [7]. Those standards cover access considerations, privacy and confidentiality, technical competencies, identification and verification issues, and related issues. In this case study, the issue of confidentiality and storage of data needed to be addressed. If the social work faculty member chose to video actual client sessions, privacy, security, and confidentiality standards (also known as HIPPA regulations) would need to be met. Because of this consideration, the practicing of clinical social work skills either had to be limited to student role play activities or data needed to be stored in a way to limit access.

Given this type of limitation and other considerations, many in the field of social work education still believe that it is not preferable to teach social work practice skills using technology, although more educators are doing just that [1, 3, 4]. Some social work educators maintain that to develop realistic practice skills, students need to develop relationships with actual clients and learn from "real-life" situations. Given the issues of privacy and confidentiality, this method of learning skills is often left for internships or "field experience." Nevertheless, technology can be useful as a simulation tool for clinical social work practice classes such that students can visualize and evaluate their performance prior to interacting with real clients.

3. LESSONS LEARNED

Both information technology and social work are applied fields, requiring good communication skills, team work, and critical thinking [2]. Overcoming the differences in communication and understandings between information technology and social work to create an EVA for the Tablet PC that is specific for social work practice classes turned out to be a very positive experience for both the IT students and the faculty member. The IT students were able to apply concepts learned in their coursework, develop a sense of professional practice with a stakeholder in a different field, and learn to work as team mem-

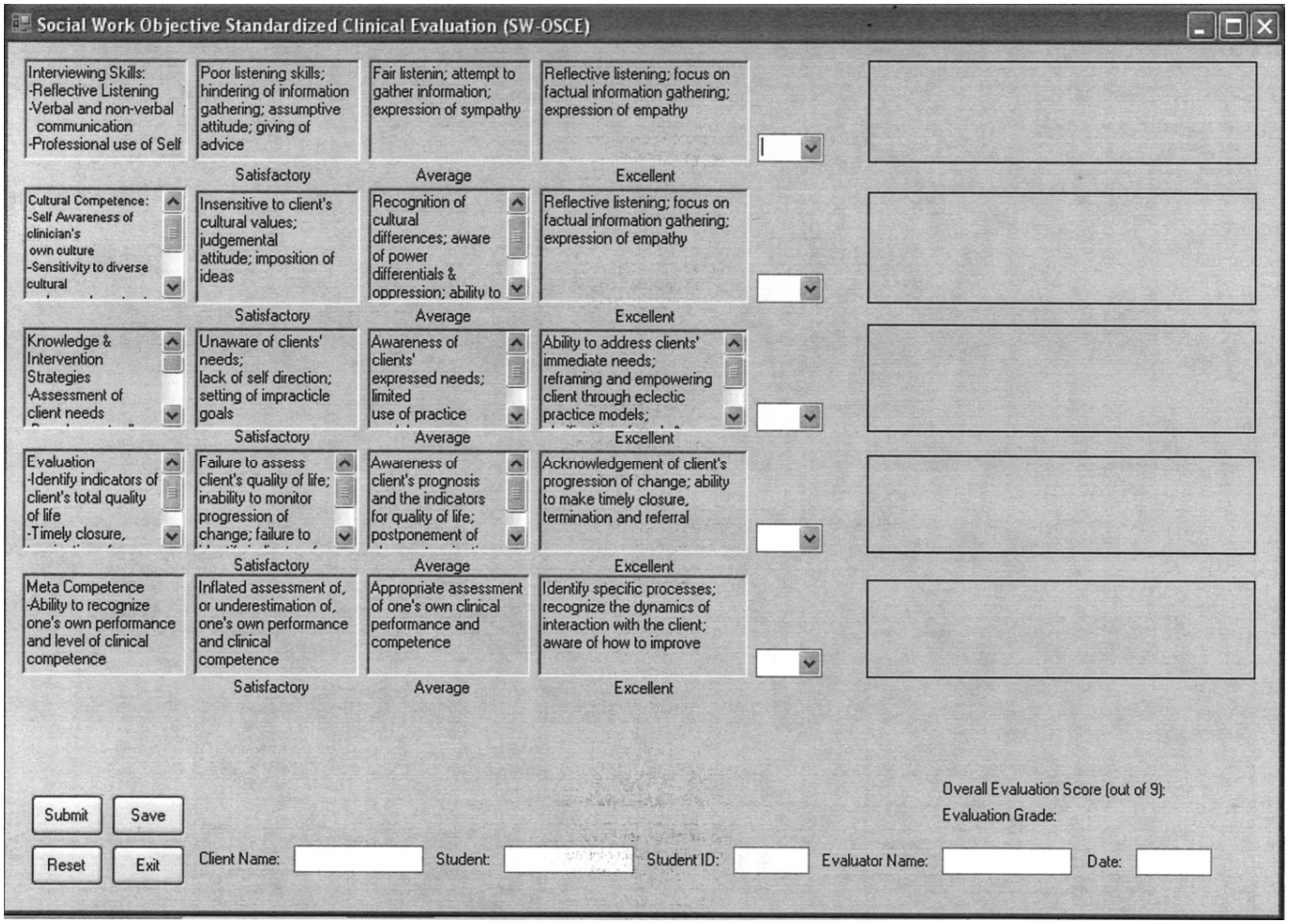

Figure 2: Final Evaluation Screen

bers. The faculty stakeholder learned to frame application requirements in a way that IT students could understand and gain confidence in using technology in professional education.

3.1 Working as an Interdisciplinary Team

This project provided a useful way for two very different professions to work together in a meaningful way. Several elements emerged that were necessary to create a successful interdisciplinary team. Most importantly, all members needed to invest in the success of the project by contributing as equally as possible. Members also needed to demonstrate professional behavior, good communication, and critical thinking skills. Assumptions such as knowledge level and power differentials needed to be addressed too. These skills should lead to successful collaborations in other dissimilar disciplines.

3.2 Impact of Tablet PC Usage in Social Work

The wide use of Tablet PC's can be attributed to their versatility and ease of use. Tablet PC's are used throughout the university, in many disciplines, in different ways. Unfortunately, social work education at this and many other universities has been slow to seize the opportunity to embrace the latest technology, such as Tablet PC's, and create useful, profession specific technology [1, 4, 8, 9]. This case study illustrates that technology can provide a huge improvement in the ease and time commitment for evaluating student clinical practice skills. Freeing faculty from the labor intensive, limited video recordings of clinical practice skills can allow for greater time spent reviewing, analyzing, and practicing those clinical skills. The major benefit of the Tablet PC is the use of the pen, which allows for handwritten notes that can be quickly and easily converted into typed data. Social work educators can use the Tablet PC like a clip board and just jot handwritten notes while reviewing student demonstrations. OneNote is also user friendly and easily adapted for use in social work practice classes.

4. CONCLUSIONS

Educators working on interdisciplinary teams have more opportunities to find the best ways to deliver education. Discussing our needs and working as interdisciplinary teams to achieve objectives benefits students as well as faculty. Examples such as this case study, whereby experiences and lessons learned can be shared with other educators across disciplines, will help educators in many fields of study broaden their knowledge and perspectives on using various types of technology. The Tablet PC offers many of those possibilities to improve education, particularly in professional fields such as social work. The next stage of this project will be to fully implement and evaluate the project described in this paper.

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