Improving Technological Competency in Nursing Students: The Passport Project

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Abstract

Integration of informatics competency into a nursing curriculum is important to ensure success throughout the education and career of contemporary nursing students. As enrollment in nursing programs increases, the diverse population of students from many different cultural and socioeconomic backgrounds presents a challenge for faculty in addressing unique learning needs. Competency in informatics will allow the beginning nursing student to navigate the on-line teaching software used by colleges. With rigorous expectations in nursing programs, students may feel overwhelmed with assignments, organization, and time management. Frustration may build when students struggle with basic informatics competency, often leaving them unable to navigate instructional websites or work with necessary on-line learning content. The purpose of this project, Passport Project for Nursing Success, was to assess the skills, knowledge, and informatics comfort level of students, while providing computer training and teaching for beginning nursing students in an undergraduate nursing program in Central Illinois. The community college encompassed students from a ten county area, with 20 percent of the student population enrolled in the Applied Science curriculum. Initial implementation occurred prior to the students' first nursing course and emphasized basic skills necessary to navigate on-line learning software, library search engines, and electronic communication. The greatest barrier to successful implementation was faculty resistance and academic support during completion of the initial implementation of the Passport Project. Post- project surveys indicated overwhelming student support for the education received and improved retention rates of first semester nursing students.

Key Words: computer literacy, informatics, nursing competency, nursing students, information literacy

Introduction

Informatics competency can be a challenge for nurse educators. The National League of Nursing (NLN) and the Technology Informatics Guiding Education Reform (TIGER) initiative suggested faculty should participate in developmental programs to achieve competency in informatics. Faculty should incorporate informatics into the curriculum and use informatics to guide, document, analyze, and inform nursing practice (TIGER, 2008). Core competencies were developed as the need and demand for health care medical information systems was increasing. Expectations were established for basic informatics skills through the TIGER initiative program. Graduating students from nursing programs must possess informatics competency in order to recognize the need for information, know how to obtain it, understand its use, and be able to evaluate the information. An initiative has been provided to nurse educators, challenging them to take responsibility to ensure informatics competence for nurses in educational programs, ultimately improving patient care.

Many states now require high school students to have basic informatics skills in preparation for college courses. Students, however, enter college with a variety of levels of informatics competency depending on the type and/or quality of their K-12 educational experience. Studies have shown the lack of skills may lead to a delay in learning or increase in frustration among students (Elder & Koehn, 2009). Assessment of skills upon admission may provide knowledge of needed skills to enable the student to perform at the college level with informatics. Learning activities could then be implemented to ensure competency in the program for managing information, assignments, and communication. Generational differences are seen within the classroom with students entering nursing programs directly after finishing high school often having an advantage. Non-traditional or second career students who have been in an environment where there is little or no computer access or exposure to computer instruction are at a distinct disadvantage. Without basic informatics skills students usually fall behind the first three to four weeks of the semester. Using computer technology will assist nursing students in the classroom and clinical settings as both a teaching and learning tool with multiple applications.

The purpose of this project was to assess the skills, knowledge, and informatics comfort level of students, while providing computer training and teaching for beginning nursing students in an undergraduate nursing program. This project was the first of its kind in Central Illinois and unique to nursing education in the area. The project was designed to provide students with an increasing level of informatics competency throughout the nursing curriculum. Initial implementation occurred prior to the students' first nursing course and emphasized basic skills necessary to navigate on-line learning software, library search engines, and electronic communication. Modules were to be added in subsequent semesters to enhance technology used for program assignments and clinical applications.

Literature Review

The importance of informatics competency in nursing practice is well supported throughout the literature. The American Association of Colleges of Nursing (AACN) in 2008 suggested introductory level nursing informatics competencies for the Bachelor of Science in Nursing (BSN) curriculum. New innovations for use of instructional technology should be developed and researched in nursing education. The study showed student nurses should be able to communicate through technology, understand the use of Windows applications and have the ability to search databases. Research by Chaffin and Maddux (2004) concluded that integrating computer technology into the nursing curriculum will assist the student in understanding the basic skills and specialized charting at the patient's bedside. Research studies examined which specific technology knowledge and skills were being taught in the nursing programs and to what extent faculty are prepared to teach technology skills throughout the curriculum. Nursing programs are challenged to decrease the gap between theory and practice in order to deliver evidence based practice in a world of information technology. Bond (2004) determined computer informatics should be implemented as criteria into the nursing profession. It is essential to provide students computer skills they will need throughout their education and in their practice as nurses. This study suggested inclusion of a program to teach computer literacy during prerequisite classes. McDowell and Ma (2007) showed increasing numbers of nursing programs that have incorporated informatics into their nursing curriculum. Very few programs have reported statistics after implementation of technology into their curriculum. Findings of an eight

year survey described by McDowell and Ma (2007) from the Department of Nursing, Salisbury University, compared basic informatics skills upon entrance and graduation from the nursing program. The ability to search databases was noted as a critical skill. Student experiences with databases, spread sheets, and statistics were low. Recommendations were made to incorporate word processing, keyboarding skills, and spread sheets as competencies for beginning student nurses.

A survey of nurse educators expressed the lack of integration of the library system and electronic databases, indicating that "students tend to gravitate to consumer information web sites opposed to research based journal articles" (Schutt & Hightower, 2009, p. 101). Students do not have the knowledge to navigate through databases for information needed. Using tutorial modules and a post quiz for understanding were suggested in this study. The students improved their ability to search databases, use evidence based practice in their learning environment, and critique articles for clinical knowledge. Concerns in the literature express the lack of computer knowledge of faculty teaching the courses and uncertainty of how to integrate informatics into the curriculum. Many faculty polled in the study were unsure what would actually be needed to provide a competency for the nursing student on informatics.

Educators need to prepare future nurses for the technology enriched environment with basic knowledge of information competency. Informatics education should be implemented throughout the curriculum to ensure students have the skills and ability to perform assignments, communicate effectively, and research data for evidenced based practice. In addition, many schools throughout the country have decided to be paperless throughout the curriculum, requiring students to purchase electronic books or 'e-Books' for their courses. Many face-to-face classes post all material in the on-line teaching software programs purchased by the educational institutions. Lastly, new federal mandates will require the electronic health record to be an accessible resource for health care providers. One study suggested "all bedside nurses must be able to manage the specific technologies used in the healthcare setting to ensure the best outcomes" (Perry & King, 2009, p. 2). Implementing informatics classes to ensure competency is necessary before students graduate in nursing programs. This is imperative in order for the

nurse to function competently throughout their professional career in a swiftly changing technological environment, especially as patient census and acuity rise exponentially. Combine that with the ever shrinking work force and informatics competency is a must. Advancement in technology will have a definite impact for the future of health care providers with the goal of providing a low cost service in a safe effective way for the patients (Perry & King, 2009).

Methodology

Assessment of prerequisite criteria and attrition rates in an Associate Degree Nursing (ADN) program led several faculty members in the community college setting to explore initiatives for student success. The study setting was nursing orientation day in large auditorium at the college. Participants of the study were the 90 incoming students for the fall nursing class, composed of various ages, educational backgrounds, and ethnicities as outlined in Table 1.

The instruments used in this study reflect a mixed method of research, applying both quantitative and qualitative data with predefined options. No tools with measured reliability and validity were available upon a review of the literature. Accordingly, faculty devised a survey of computer literacy based on curriculum needs and expected student assignments to determine important factors for student success. Following a discussion between nursing faculty and the Teaching and Learning Center of the College, it was determined that assessment of student knowledge of basic computer skills prior to beginning the nursing program would be both productive and invaluable.

The pre-entrance (pre-test) survey was used to identify informatics competency and learning needs of the student required for successful completion of assignments in the nursing program. This survey utilized quantitative description with predefined options. Analysis of the survey results revealed that the students were at different learning levels in terms of informatics competency. The average score for the pretest was 42.16 out of 54. Based on these results and informal student surveys conducted prior to this project the pilot program Passport Project for Nursing Success was launched as a means for improving student orientation and informatics

competency prior to the beginning of the nursing curriculum coursework. With improvement in informatics competency, the attrition rate in the program was likely to decrease.

Modules were created using Blackboard, the web based course management system of the College. On-line tutorials with questionnaires were used to facilitate the learning needs of the students. Examples of assignments from the first semester were integrated to increase student familiarity and efficiency once nursing core classes began. Essential items to have mastered at a given level of competency were assessed in post module tests. These items were constructed based on the learning objectives of each unit and a simple true and false format as used most often, providing for both simplicity and face validity. Qualitative measures were utilized to evaluate student learning in Modules three, five and six. This evaluation was subject to bias and is admittedly a weakness in methodology. Using this mixed method of learning evaluation improves overall reliability and validity of the measures as a whole.

All 90 students returned the informatics questionnaire. The data was reviewed by three nursing faculty who entered and saved statistics through the Blackboard site. A protected user name and password was used when accessing the data by the faculty members.

Data analysis was conducted by the faculty group and on an individual student basis with the assistance of academic advisors within the nursing department of the College. A summative evaluation was then submitted to each student's advisor before the start of the first semester (see Appendix A). All 90 students completed the modules and evaluation. Descriptive post-tests emphasized the learning satisfaction and improvement in computer literacy prior to the start of the students' first semester in the nursing program. The post-test result average was 51.27 out of 54. The faculty and Teaching and Learning staff determined that the Passport Project Assessment would be implemented across the nursing curriculum with unique informatics goals and assignments, each progressively building the competency of the student. Nurse educators across the country have been challenged to integrate informatics into curriculums, enhancing learning and skills for students completing nursing programs and providing preparation for necessary competence as students become nursing professionals.

Assessment of Informatics Competency

A pre-test was administered to students entering the first semester of the nursing program. Demographics of the student population are outlined in Table 1. Questions consisted of basic informatics knowledge and comfort with educational use of technology. There was no evaluation of the student's current level of informatics competency prior to initiation of the Passport Project.

TABLE 1: Passport Project for Student Success Participant Demographic Information

Gender	Enrolled Ages	ACT Score	GPA	Geographical Area	Minority	Recipient of Financial Aid
Male 7 Female 83	25-62 years Median Age 27	20(minimum)	2.5(minimum)	10 counties in Central Illinois	17.2%	53%

An assumption was made that the students had obtained basic informatics skills in prerequisite course work. Nursing education literature provides us with data which indicates nursing education is exploring more technology with simulation, distance learning, and informatics to improve program outcomes (Fetter, 2009).

The nursing Passport Project pre-test evaluated the student's access to a computer that would be utilized to work on class assignments. The conclusion of the data found that a personal computer was used by 94% of students questioned, while 6% were dependent upon the college's computers. A backup plan was required in the event one's primary computer failed. The College's computers were designated as backup for 50% of the students, 20% had a second home personal computer (PC) available, 18% used family or friend's personal computers, and 12% planned to use a PC at work or a local public library. The type of Internet connection being utilized by the students was surprising. The majority utilized Digital Subscriber Line (DSL) for their access, while 12% used dial-up, and 10% were totally dependent upon the College's network on-line system.

Electronic communication and etiquette used on-line were addressed during this pre-test. Clarification and direction were required relating to using the College assigned e-mail account for communication. The majority of the students understood that in the web based course management system, Blackboard program announcements pertaining to their courses were posted on the site, whereas 25% of the students assumed that the announcements would be e-mailed to their accounts when posted. This was a potentially significant falsehood and had the potential of multiple communication errors. The introduction of etiquette on-line 'Netiquette' revealed many misconceptions related to on-line behaviors. Many of the students were unaware of basic professional netiquette. For example, students did not realize that every e-mail should have a greeting and a salutation. An overwhelming majority understood that anonymous e-mails or postings were not allowed. The data also found the same majority was under the assumption that profanity was allowed if "quotes" were utilized. The netiquette concepts of shouting with CAPITAL letters and a 'flame' involving an e-mail or posting that expresses a strong opinion or emotion were new standards for 50% of the students.

Learning Module Content

The Passport Project consisted of seven learning modules as illustrated in Table 2. The modules were developed for student learning and assessment of computer literacy correlating with class and clinical work required in the first semester nursing program. In addition, the learning modules were used to provide an elementary introduction to research, APA style format, and the College in general.

Module One consisted of a basic computing tutorial. Students reviewed functions of the computer programs in Blackboard, and simple Internet access. Questions regarding the nursing program guidelines and computer usage were embedded within the content, emphasizing content necessary for future student success. Nursing students would be expected to use Blackboard to navigate the class information, complete and submit assignments, and participate in communication throughout the nursing program. Additionally, they would be expected to use Microsoft Word, Power Point, basic e-mail and discussion boards in the classroom setting. In clinical practice the nursing student would need to be able to navigate through the electronic

chart, databases and on-line resources for pharmacological and protocol information. Module One of the Passport Project focused on these areas of informatics competence. The literature suggests nurses graduating with a basic knowledge of informatics will be able to apply the skills in the clinical settings with information technology systems (Maag, 2006). Informatics competency also will help the student to use evidenced based research for nursing practice. At the end of the Module One, the students completed an assessment of the tutorial.

Table 2: Learning Modules Content for Passport Project

Modules	Description	Learning Evaluation
Module1: Basic Computing	Computing knowledge and access including storage of files and use of email.	Quantitative pre-defined options providing assessment of learning objectives.
Module2: Nursing Program Handbook	Overview of the rules and expectations of the nursing program. Privacy, confidentiality, and professional behavior were included.	Quantitative pre-defined options indicating an acceptable knowledge level regarding nursing program policies within the College.
Module3: College Orientation and Resources	Orientation to the College through interactive modules with resources for academic, financial, computer, and personal issues.	An interactive evaluation using an on-line college map followed by pre-defined options assessing students' knowledge of the College resources.
Module 4: Netiquette	A presentation on appropriate on-line professional behavior in email and discussion boards.	Quantitative pre-defined options were used to assess knowledge and learning objectives.
Module 5: Managing Documents	Tutorial of the use of word documents including drawing nursing care maps (flow sheets) with diagrams.	Students were required to construct and submit a document using the skills introduced in the module. Evaluation was qualitative and descriptive. Academic advisors were responsible for evaluation of each student.
Module 6: Research and APA	Use of the library and academic resources were presented in a Power Point tutorial. APA format introduced and resources provided to students for correct academic writing.	A qualitative assessment was conducted, with advisor review of students' ability to write a one page APA -style paper.
Module 7: On-line Testing	Presentation of on-line quiz and testing methods with the Blackboard Software.	Quantitative pre-defined options providing assessment of students' knowledge of test taking rules and skills.

Note. All learning evaluation was post-test format and conducted online.

Module Two included a tutorial on the nursing program, including general information contained in the nursing student handbook. An overview of the history of the college and facility were discussed. Expectations of the college student were outlined as well as regulations regarding student activities, dress code, security, and parking. Information was reproduced from the handbook itself in 'pdf' style. Health record and insurance requirements of the nursing student were identified. Additionally, an outline for the different course requirements in each semester of the curriculum was made available within the module via handbook pdf. Policies and procedures of the college were to be read and viewed as a guide and Health Insurance Portability Act (HIPPA) regulations and confidentiality issues were identified for patient care throughout the program. The literature review supported the creation of assignments using information competency as a means to increase student awareness, ultimately improving delivery of safe and effective patient care (Flood et al., 2010). Students need to be able to locate, evaluate and use information to find resources to be successful in both the student and professional roles.

Module Three consisted of a Power Point tutorial on general College orientation and resources which are available to students. Orientation to the College was implemented through an interactive module. Location and directions to campus buildings, dining facilities, and study labs were provided for student use. Resources for students on counseling, financial aid, testing services, and sports activities could be accessed through the module. The computer lab, computer help desk, library, and skills lab information was posted for accessibility to students. Links for information and resources were also provided throughout the tutorial.

Module Four consisted of a Power Point tutorial about using e-mail and the discussion board from the College's Blackboard program. A professional work environment may require the student to use basic skills, manage information, and communicate effectively, (Elder & Koehn, 2009). The students were taught to access their school e-mail address and set up a password. Netiquette rules were established, outlining basic expectations for e-mail among students and faculty while at the College. A discussion board feature within Blackboard was utilized with both on-line and in seat classes. The use of this feature has increased with a need for professional ground rules. The discussion board exercise within the module provided an opportunity to

practice appropriate on-line discussion within an academic setting. At the end of the module students were asked to complete three tasks. First, students were asked to e-mail their advisor to ensure working knowledge of their e-mail address within the Blackboard program. Second, an assignment was given to students to respond to a question about professionalism in nursing on the discussion board. Third, the students were assigned to post a note about themselves socially on the coffee table discussion site online.

Module Five consisted of a tutorial providing the student with guided instruction for completing clinical assignments in the nursing program using word documents. Integrating technology into all clinical and theory nursing courses with minimum standards for students has been recommended in the professional literature (Fetter, 2009). Students would work through the process of completing assignments by using features with editing and formatting in Microsoft Word. Text boxes, circles, lines, and graphs were utilized. Nursing care plans would be expected to be created for patient care assignments. This Passport Module provided the student with time to practice drawing the care plan using columns and rows in a concept map format required by the nursing program. Next, the biographical data, pathophysiology of the patient's diagnosis, medications, and lab tests were included using connecting boxes or circles in the concept map. Students were expected to complete a concept map diagram and submit the example in the drop box on-line within Blackboard. Because the faculty felt this skill would be needed early in the curriculum, it was included in the Passport content. This content also provided students with additional training in Microsoft Word, utilizing higher level functions than many students were currently acquainted with. The student's advisor would then be able access the document to ensure understanding of the assignment format prior to the clinical experiences.

Module Six explained the use of library resources. Students would learn through the tutorial how to begin to find research information by accessing databases and using appropriate sites from the Internet. Module Six also included a tutorial and an example paper using the fifth edition of the *Publication Manual of the American Psychological Association* (APA) format. This was the most current version of the publication at the time. The literature review by Flood, Gasiewicz, and Delpier (2010) suggested integration of informatics throughout a curriculum with increasing

levels of difficulty. Students will need to be able to perform a literature review, compare information for evidenced based data for practice, and write a research paper using APA format while in the nursing program. The data gathered would then be used for clinical application with patient care. Students were expected to complete a short research assignment and write a one page paper in APA format using information from a database. The example would then be submitted through Blackboard to the drop box for their instructor to evaluate.

Module Seven consisted of a tutorial and assessment using on-line quizzes and tests with the Blackboard program. On- line quizzes and tests would be utilized throughout the curriculum. Maag (2006) suggested that students should be given opportunities similar to educational experiences in the program to ensure competency. Rules regarding the submission of tests, timing, and etiquette were identified in the module. Students completed an assessment regarding information learned in the tutorial. Computer assessment allowed for immediate grading with multiple choice and true false questions. The feedback allowed the student to understand the computer skill and rationales for learning.

Data Collection

Following completion of the Passport modules, students were required to complete a post-survey assisting the faculty in evaluating the effectiveness of the project. All 90 students were required to respond electronically. The responses were not anonymous and consisted of five essay questions, allowing the student to share ideas and thoughts regarding the effectiveness and necessity of the Passport Project. The post-survey example is located in Appendix B.

Student responses were overwhelmingly positive and the vast majority of students found significant value in each learning module. The most common theme throughout was one of appreciation for the enhanced education, allowing students to begin courses with an improved understanding of informatics and the Blackboard web based course management system. Student responses consistently indicated new learning and competency with the Blackboard program, different software, and the intricacies of its use. Many students expressed significant learning

with regard to College e-mail function and professional standards in electronic communication. The majority of student responses discussed new learning in the areas of APA format and use of library databases indicating the value of both. Positive themes were noted regarding confidence, accountability, test taking, student handbook information and the refresher review in the feedback surveys. Of significance, many students surveyed had not been College students for several years and appreciated this improvement in their informatics competency.

The following are examples of the negative responses to the survey. Some students complained that the academic advisor assigned to evaluate progress in the Passport was not able to answer questions and availability of the person to whom they were assigned was not adequate. Some students felt that the information was a review and others felt that they did not have enough time to complete the Passport activities due to other demands within the schedule. Several of the students felt they were already familiar with all tasks required.

Barriers

Students were required to complete the modules of the Passport Project, and consistent with the research, nursing faculty was found to be the greatest barrier to utilizing technology within the curriculum. Upon evaluation of the Passport Project, student responses to the survey were considered in addition to subjective faculty evaluation. The major challenges to student completion of the project were listed as inaccessible faculty and a lack of technology knowledge specific to the Passport Project in general on the part of some faculty advisors. This finding is consistent with national data in nursing education. In a study conducted by Ornes and Gassert (2007) the findings were similar and the authors considered faculty issues as the "greatest block to incorporating technology into curricula" (p.78).

Other challenges during implementation were beginning a new program with first semester students because of the rapid pace of the two year Associate Degree Nurse (ADN) curriculum. Faculty found it difficult to include informatics into an already overloaded curriculum. Conversely, the students needed to have knowledge from the beginning of the program in informatics to accomplish the assignments in each course. Evidenced based practice in nursing

education supports this. Ornes and Gassert (2007) found that the knowledge of faculty and a commitment to an improvement of informatics competency among all nursing students is a necessity for nursing education and the novice nurse in practice.

Upon implementation of the Passport Project, three faculty members volunteered set times to be accessible in the school computer lab as resources while students accessed the modules. More than half of the students came to the computer labs at the specified times for help and support prior to the beginning of the semester. The learning Resource Centers at the College were accessible to the students prior to the beginning of the semester. One barrier noted was the Resource Center for health career students was located in a different part of the campus than the nursing classrooms and advisement center. Another barrier identified was that the staff working at the Resource Centers was not from the nursing program and was unfamiliar with the computer expectations of the curriculum. Faculty competency in computer informatics can be confusing as to what constitutes essential informatics for students (Flood et al., 2010).

Many students originally resisted the program due to having rural addresses and dial up computer program access. Minimal requirements of the student's electronic computer system were explained to the students on orientation day prior to the start of the Passport Project. A working computer and backup plan were suggested. The nursing faculty was expected to have the knowledge of the informatics skills needed throughout the curriculum. However, a study by Fetter (2009) discussed faculty has not had flexibility or funding to acquire and update informatics skills at most institutions.

Discussion and Conclusions

Nursing education has evolved during recent years, requiring an increasing level of technological knowledge from students with the advent of on-line teaching, simulation, and computer based learning systems for coursework. Student competency in healthcare informatics has been defined as a top priority in nursing education. Information technology (IT) skills have been identified as vital to success in nursing undergraduate education. As a result of this need, the

Passport Project was developed within a Community College Associate Degree nursing program in Central Illinois. This project assessed the technology skills of incoming nursing students and provided them with on-line education, assessment, and evaluation of targeted skills prior to beginning nursing courses. Implementation of the project was unique to the area and the first of its kind in undergraduate education in Central Illinois.

Student assessment results indicated a vast gap in knowledge of basic computer software, rudimentary e-mail and communication skills, and college specific software driving traditional, hybrid, and on-line courses. The Passport Project provided early intervention and education of the student group, leading to decreased attrition levels in the first semester. Students were empowered to learn the technology necessary for success. Post-survey results showed positive feedback themes throughout the Passport Project. Students expressed an increase in confidence levels and accountability through the self-paced modules for learning. A refresher and review of writing using APA format, netiquette, e-mail, and test taking were helpful before the start of the nursing program.

Three faculty members within the Community College developed and implemented the program with assistance and support from the technology support staff within the College. Consistent with the nursing education literature, faculty resistance, and varying levels of technological competence were isolated as the main barrier to improving student education in the area of informatics.

Limitations

Limitations of the study included concerns of both reliability and validity. Few tools exist in the nursing literature as tested measures to evaluate student technology competency. This forced the authors to construct unique instruments to assess student knowledge. An additional limitation included the subjective evaluation of student post-module work by faculty advisors. Survey feedback provided suggestions for future Passport modules. Specific areas of future module construction included working with spread sheets, patient charting, use of electronic medical records, simulation activities and resolution of legal and ethical issues. In addition survey data

indicated areas of improvement for the project including repetitive questions, and spelling errors, increased accessibility of faculty, increased amount of time for completion prior to the beginning of the semester and consistent knowledge among advisors and faculty regarding technology competency.

Future Research

Future research for programs similar to the Passport Project is needed with increasing demand for technological skills becoming inherent in health care and our society. A review of the literature revealed a specific need for increased nursing informatics research. Few studies exist definitively describing the technology competency of beginning nursing students. Nursing education must provide for increased integration of technology across the nursing curriculum, providing students and future nurses with up to date skills. The healthcare environment is increasing its dependency on electronic communication and technology, mandating that future nurses enter the workforce with the skills necessary to be competent in their profession.

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Appendix A: Nursing Student Learning Community Technology & Learning Passport

Posted online in blackboard to print. Paper copy submitted to faculty advisor and kept in permanent student file at the end of the semester.

Semester 1 Passport Modules	Due Date	Academic Advisor Signature	Date
Basic Computing			
Nursing Program and Handbook			
Student Orientation and Resources			
Email and Discussion Board Etiquette			
Managing Documents and Forms			
Library Research, Web Searches, APA			
Online Quizzes and Tests			
Semester 1: _____ **Successful Completion!** _____ / _____			
Term *Advisor's Signature* *Date*			
Semester due date: _____			

Appendix B: Post Passport Project Survey Questions

Accessed and completed as an on-line quiz at the end of the module. Data collected from faculty site on blackboard program grade book. Secured data with username and password in accessing grade book)

1. How did the information in the Passport Project assist the student in the nursing program using the online teaching software program?
2. In what way did the Passport Project assist the student to improve technological competency?
3. What was the most valuable concept the student took away from the Passport Project experience?
4. What was the least helpful part of the Passport Project?
5. What changes or improvements would you recommend for future Passport Projects?