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# Teaching health information science for health care instructors

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### Abstract

Health Information science is part of health care. Today the use of technology by health care students is relevant in all parts of their communication. How can we better prepare students wanting to work in health care to face these various technology challenges in health? How can we bring health care students to be competent, ready and comfortable enough to face the health care technology challenges in their specific field?

### Introduction

Bringing content from Health Information Science (HIS) that will provide students with tangible activities is important for future health care professionals and their instructors. Concern has been raised by many educator colleagues about the unsatisfactory, poorly structured emails that students send.  This brought me to explore the question: "what are the communication issues that exist in a virtual environment?" Many believe that *students are computer savvy* but these instructors are not satisfied with the performance of these computer savvy students in something as simple as an email. One student stated: "how can you expect students to compose a professional email when we were never taught how to do this?" This was the beginning of my journey to find a solution to this issue.  I was thinking: what kind of learning activities would students and instructors would find essential to work through and embed in their practice.  Four main activities were developed and suggested to be offered in a third year nursing

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course. This paper discusses the development of these four activities, how these activities were evaluated by the students, the results and what outcomes were identified for future research.  In the latest edition of the activity handbook a link was made between the specific learning activities and the new *Nursing Informatics Entry-To-Practice Competencies for Registered Nurses* developed by the Canadian Association of Schools of Nursing (CASN).

## 1.     Objectives

  When consulting the document *Competencies in the Context of the Entry-level Registered Nurse Practice in British Columbia* (College of Registered Nurses of British Columbia ((CRNBC)) it is noticed that: "Entry level registered nurses understand the significance of nursing informatics and other information communication technologies. They use existing health and nursing information system to manage nursing and health care data." These statements guided my selection of activities to be practical for the future health care professional working in the field. Researching the literature, I had the opportunity to read this interesting report: *Educating Tomorrow's Nurses – Where's Nursing Informatics?* This document complimented very well the Doctoral research from Mrs. Sylvie Jetté. Two specific recommendations triggered me to develop four specific activities.

> point 2 : *Cibler les ressources internes suivantes dans la formation des infirmières et infirmiers* :
>
> - *La recherche sur les banques de données scientifiques électroniques;*
> - *L'évaluation des sites internet en sante;*
> - *La sécurité des données électroniques en lien avec les droits des patients*
>
> point 4 : *Utiliser diverses stratégies à l'intérieur du programme de formation pour familiariser les Étudiantes et étudiants à l'utilisation des TIC.*

  This second recommendation provided me the energy to share the HIS handbook activity with my coworkers at Camosun College.

  In the meantime, the National Expert Commission     launch: *A nursing call to action (Canadian Nurses Association, Vancouver, 2012)*. This document linked directly the application of the HIS handbook activities, calling educators to focus on: "working collaboratively to reach consensus on the scientific knowledge, education, competencies and skill sets demanded of effective 21[St] century registered nurses". At the same time CASN launched their competencies and I had developed the activity that was linking all of this.  I was invited to implement these activities at the University of Victoria, School of Nursing. The handbook activity was developed with the main goal to provide activities that can help and enhance discussion between the health care instructor and the student. These self-directed activities can be completed prior to come to class and then it provides a great resource foundation for future assignments.

## 2.     Health Information Sciences activities

      The four health information sciences activities are:
- confidentiality & access with technology,
- social media,
- email/text communication and
- evaluation of health care web sites.

      The first activity provides an opportunity to gain an understanding of how health care students are keeping in mind the ethical considerations when they access, view and interact with data through technology. The second activity focus on social media and how future health care professional can interact, enhance their

practice by still keeping their boundaries with a respectful professional behavior. The email/text communication activity provides the student with a greater understanding of the rules, the etiquette and the core elements included in writing a professional email or a text message. The evaluation of health care web sites is the last activity in the HIS handbook.  The future health care professional will acquire the skills on how to determine the validity of a health care web site with feeling more confident about searching the credibility, authority and reliability of the information consulted on health care web sites from the World Wide Web.

### 3. Evaluation

   The first year that these activities were implemented, students and nursing instructors provided very positive feedback - through spontaneous oral feedback or the receipt of emails. After reviewing the feedback ideas and suggestions were then included in the activities for the next time the class was offered. The activities were then included as part of a mini 2% assignments activity due in class.  The last day of the semester marks were provided to the students and anonymous feedback was sought through a free clicker application (Socrative).  Thirty four students out of 40 participated in the survey.  Students were asked to compose their own unique identification an answering the following questions to the corresponding Likert scale (Strongly agree, Agree, Undecided, Disagree & Strongly disagree). The last two questions (Q5 & Q6) where open-ended questions for students to answer.

   Q.1: Learning how to write a professional email or text communication was a valuable activity for my future RN practice?
   Q.2: Learning how to evaluate a health care web site was a valuable activity for my future RN practice?
   Q.3: Learning how you can use various social media to enhance your practice and reach more clients was a valuable activity for my future RN practice?
   Q.4: Learning the differences between confidentiality, privacy and security was a valuable activity for my future RN practice?
   Q.5: Do you have any suggestions that can enhance these 4 main activities?
   Q.6: What other topics would you like to see in the next edition of this handbook?

### 4. Results

Fig. 1 - Evaluation of the four main activities & satisfaction rate of students question 1 to 4.

| Question | Strongly agree | % | Agree | % | Undecided | % | Disagree | % | Strongly disagree | % |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13 | 38% | 18 | 53% | 2 | 6% | 1 | 3% | 0 | 0% |
| 2 | 18 | 53% | 13 | 38% | 3 | 9% | 0 | 0% | 0 | 0% |
| 3 | 4 | 12% | 22 | 65% | 6 | 18% | 2 | 5% | 0 | 0% |
| 4 | 9 | 26% | 18 | 53% | 6 | 18% | 1 | 3% | 0 | 0% |

Fig. 2- Student's suggestions to enhance these four main topics form the HIS handbook activity.

| N | Answers : |
|---|---|
| 14 | No, None, N/A, the activities where just fine, can't think of anything in particular. |
| 3 | Well structured, well lay' d out |
| 3 | Make the assignment worth more |
| 5 | The assignments were good and relevant to nursing, well done gives me a great resource. The activities were short, simple, and applicable to practice...Without needing to be changed or modified. No suggestions |
| 2 | Confidentiality issue should be more expanded to community settings |
| 2 | Discussion with the group or group work |
| 3 | Discussing them in class a bit. More clarification on Moodle. |

Fig.3 – Other topics that students would like to learn in a future HIS handbook.

| N | Answers: |
|---|---|
| 26 | No, None, not sure, |
| 8 | Making/creating professional social media page, paperless hospital, nursing application and resume, using Facebook and Instagram professionally, more practice with professional communication in the work place, how to be professional for a presentation. Teaching regimes to patient, advocacy, policy making in epidemiology. |

## 5. Discussions

The analysis of the data collected from questions 1 to 4 in this survey provides information on the various HIS learning activities student's satisfaction rate. The evaluation of a health care web site is the most popular activity with a *strongly agree* satisfaction rate of 53 %. The following activity "how to use various social media" received an *agree* satisfaction rate of 65 %. The two other learning activities received the same *agree* satisfaction rate of 53%.

When compiling the results for question 5 it motivated me to readjust the syllabus for subsequent years' course. The value of the mini activities was increased, at the beginning of the semester students received a written guideline with an explanation for each learning activity, one week before the activity was due   activity was validated with students  and  further clarification  was offered.  One area identified for future development was a more specific activity on confidentiality when caring for people in community and public health without neglecting the link between the community and the acute care settings.

The last question in the survey provided precious data on what were the topics students would like to learn more about.  When reading the data it is fascinating to corroborate information that was recommended by the Doctoral study of Mrs. Sylvie Jetté and this survey. Students identified that they would like to learn more about how to develop a professional presentation with interactive tools and how to understand how to use social media better.

## 6.    Conclusion

  This project began in the summer of 2012 and since then the embedding of these learning activities into the clinical practice of students and faculty is visible. After consulting with peers (at local, provincial and national levels) and receiving encouragement from students and other UVIC nurse educators, I decided to seek the possibility of having this handbook published on a nursing resource web site. On April 15<sup>Th</sup> 2014, I received an email confirmation that NurseONE. from the Canadian Nurses Association has decided to post this content on their new public resources tab. I am looking in the near future to develop a second handbook with four other topics that can be inspiring for the health care community when interacting with health information sciences technology.

## Acknowledgements

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