Web 2.0 in Building Nursing Information Portal

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Abstract

- *The purpose of the study is to use the web 2.0 concept in developing the nursing Information portal (NIP) in a large medical center with 1800 nurses. The website contents have been created and maintained by end users instead of traditional website manager. The website manager chose Microsoft SharePoint Service 2003 as the portal website developing tool to meet head nurses' information management needs, such as news, documentations exchange and survey taking. According to the study results for users' acceptance, nurses are very satisfied with the NIP.*

- ***Key words:*** ：Web 2.0, Nursing Information, Portal

Introduction

- Nursing management is a complex work because nurses represent the largest group in hospital.
- The common need for all of them is a useful Information tool to help them deal with their work more efficiently .
- In order to let the general nurses who never take any professional IT programming training, the information tools must be very easy to learn and easy to use.

- The Web 2.0, a phrase used by O'Reilly Media in 2004, refers to a new generation of Internet-based services such as social networking sites, communication tools that emphasize online collaboration and sharing among users.
- Users could easily edit their own information and put their documentations or multimedia materials on the websites.
- In this study, we chose Microsoft SharePoint Service 2003 (SPS) as our Nursing Portal platform.

Materials and Methods

- In May 2006, we started to use the SPS to build our new nursing information portal (NIP).The structure is showed in Figure1..
- The informatics nurse plays a role the initial role to manage and design the website.
- When the prototype website was created, more nursing managers were assigned to participate in the training courses.
- There was a 2-hour training course in the first week and 1-hour in the following two weeks.
- Three months later, the NIP was formally for open to all nurse members. The NIP is showed in Figure 2 .

Figure 1-The Structure of Nursing Information Portal

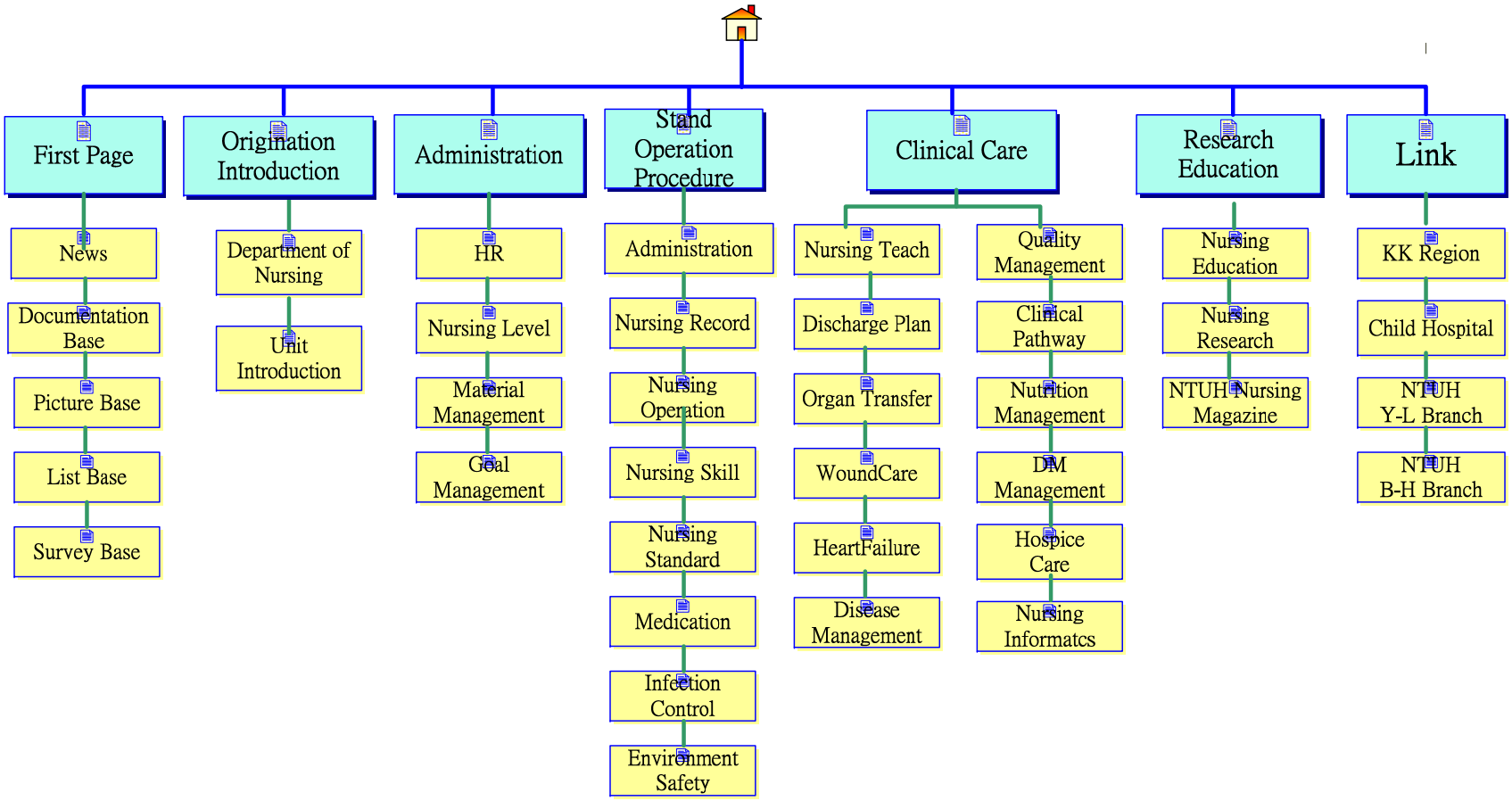
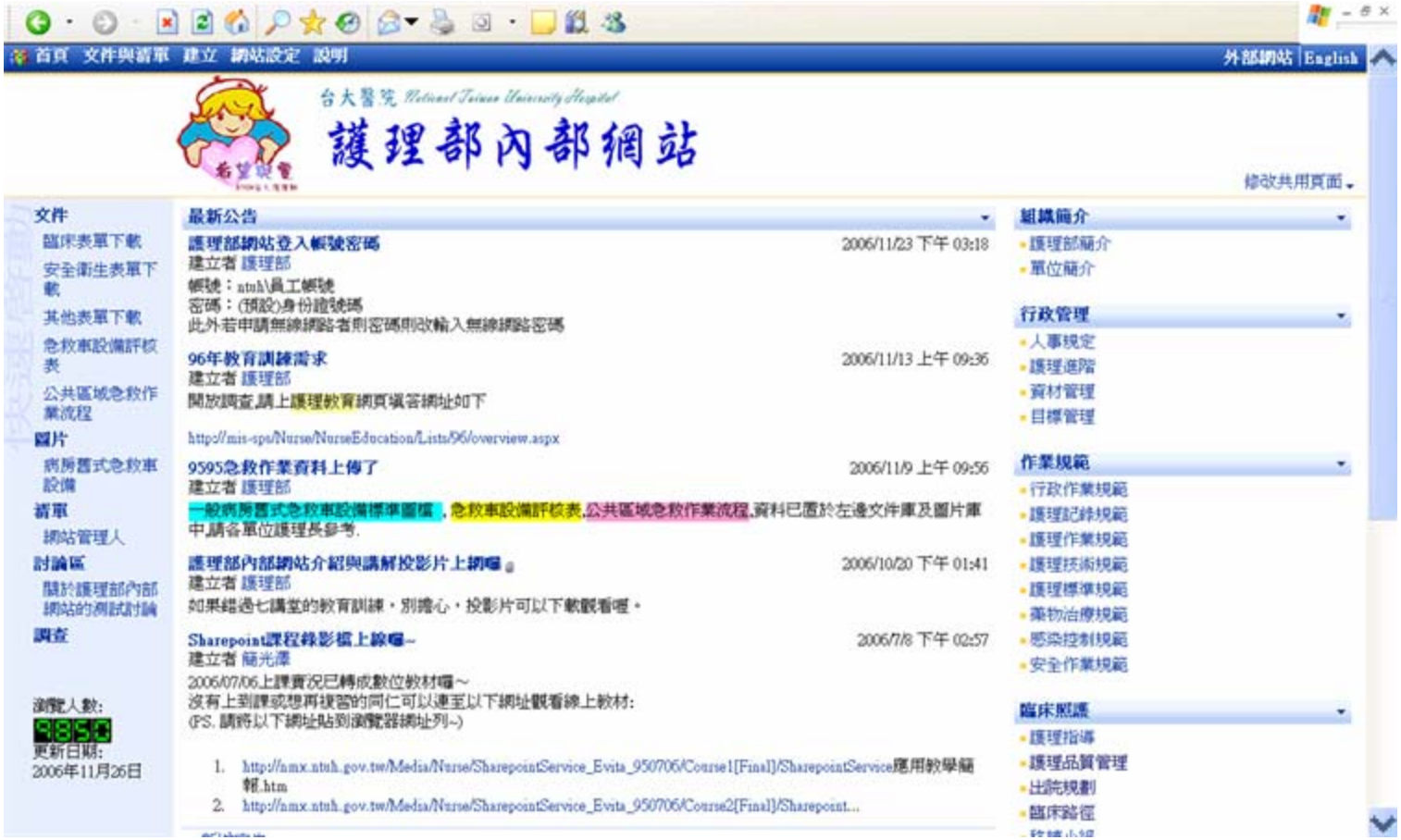


Figure2-
The Nursing Information Portal



Results

- We totally created 28 sub-sites in NIP. There are 24 nursing managers assigned to manage the website, including 13 nurse supervisors, 8 special functional nurses, 3 administrators.
- After the training course, 7 special functional nurses design their assigned website on their own.
- Nurse supervisors were too busy to design by themselves and to supply the materials and to ask the informatics nurse to help them in beginning.
- However, they sometimes needed to collect data form units so they would ask informatics nurse to teach them how to create a survey in NIP. With this regard, the NIP became their useful tool to data collection.
- There were 29 questionnaires returned with a return rate of 36.7%. The result of questionnaire survey is shown in Table 1.

Table 1-

The results of nurses' acceptance of the NIP

Questions	Strongly Agree	Agree	Undecided	Disagree
The history data of website can be kept for a long time.	4(13.79%)	10(34.48%)	15(51.72%)	
The website can save of my total working time	8(65.52%)	19(65.52%)	2(6.90%)	
I feel that the website is easy to use.	6(20.69%)	16(65.52%)	3(10.34%)	1(3.45%)
I feel that the website is reliable	3(10.34%)	21(72.41%)	5(17.24)	
I feel that the functions of website are complete.	1(3.45%)	21(72.41%)	4(13.79%)	3(10.34%)
I feel that the data in the website are correct.	3(10.34%)	23(79.31%)	3(10.34%)	
I feel that the website could precisely record the execution time.	10(34.48%)	15(51.72%)	4(13.79%)	
I feel that the data of the website is easy to get.	3(10.34%)	22(75.86%)	3(10.34%)	1(3.45%)
I feel that the functions of the website are easy to understand.	4(13.79%)	16(55.17%)	8(27.59%)	1(3.45%)
I am satisfied with this website	4(13.79%)	20(68.97%)	5(17.24%)	

I feel that the website is useful for my work.	6(20.69%)	21(72.41%)	2(6.90%)	
I feel that the website is friendly to use.	3(10.34%)	25(86.21%)	1(3.45%)	
I feel that the website has improved the working flow.	6(20.69%)	19(65.52%)	4(13.79%)	
I often use the website information.	2(6.90%)	22(75.86%)	3(10.34%)	2(6.90%)
Overall, the website could improve the communication and collaboration .	5(17.24%)	18(62.07%)	5(17.52%)	1(3. 45%)
Overall, the website could increase the care quality to patient.	3(10.34%)	9(31.63%)	**17(58.62%)**	
Overall, the website could increase the efficiency to Department of Nursing.	6(20.69%)	20(68.97%)	3(10.34%)	
Overall, the website could simplify the workflow.	8(27.59%)	20(68.97%)	1(3.45%)	

Discussion &Conclusion

- The NIP appears to be a useful tool for nurses to meet their information needs.
- They could collect the data more efficiently then before.
- Some head nurses even asked informatics nurse to integrate more functions into NIP, like the documentation records. Some nurses did appreciate this website.
- The Web 2.0 concept in nursing information portal appears successful from our study.
- In the future we would also like to teach our head nurses to manage their unit websites to improve their wok performance then before and to increase their acceptance of NIP.

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