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The Reality and Challenges of Middle Nursing Manager Participation in the E-learning for New Graduated Nurses

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Abstract. During fiscal year 2010, I. hospital changed its educational modality for new graduate nurses from conventional classroom education toparticipatory education using an e-learning. The e-learning system is a system designed to enable users to view and review educational materials repeatedly anywhere and anytime, write their observations and comments, and do knowledge management. Through the process of this challenge, new graduate nurses showed positive attitudes toward writing comments and training. Middle nursing managers, however, who play a pivotal role not only in management but also in serving as an educational resource in nurses' development, wrote relatively few comments, which created a difficult situation for knowledge collection. In this study,we used a questionnaire survey administered to middle nursing managers to analyze this problem and consider improvement strategies based on the use of e learning.

Keywords: E-learning, New Graduated Nurses, Middle Nursing Manager, Knowledge Management.

1. Introduction

With regard to factors that make it difficult for new graduated nurses to successfully settle into the workplace, a 2005 survey report on the early retirement of new graduated nurses (conducted by the Central Nursing Center run by the Japanese Nursing Association) [1] states that "there is a gap between practical nursing competence learned from basic nursing education and what the clinical side requires". Responding to this need, clinical training for newcomers after graduation became an obligation for efforts undertaken in 2010. Education for new graduated nurses are increasingly necessary for efforts at improvement.

In the nursing service department ofI.Hospital, section head nurses have played a central role throughout the year in planning, implementation, and evaluation training for new graduate nurses after recruitment (hereinafter designated as training). However, the planning side has shown a tendency to fall into a routine or rut in terms of training contents because classroom-centered education does not have systems to give feedback on the success of on-the-job training (OJT). Moreover, no tools exist to evaluate education objectively.

For that reason, administrators changed the training style in 2010 from classroom-centered education to participatory education in which learners use e-learning and are given pre-assignments. Consequently, after watching nursing skills videos, new graduate nurses have actively learned by making use of e-learning and have noted in writing points they did not understand, or goals they wanted to achieve. A certain level of effectiveness was observed from that process. However, the middle management tier of nurses (hereinafter designated as middle management), who were in positions of leadership such as section head nurses and head nurses, seldom replied to questions posed by new graduates or wrote about their knowledge from experience. Although notification of this situation had been made through head nurses and section head nurse meetings, committees, and posters, they did not take much interest in an e-learning.

Therefore, this study was undertaken to clarify actual participationby middle management in e-learning and the current problems in middle management, as well as to improve future training methods for new graduated nurses using e-learning. We conducted this study by examining middle management'slevel ofparticipation inthe e-learning system and by evaluating the results of a questionnaire survey.

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2. Outline of New Graduated Nurse Training

2.1. E--learning System

The SceneKnowledge (NTT Cyber Solutions Laboratories) e-learning system was implemented as the core tool of the e-learning program.

Using the system, a user can input comments while watching nursing skills videos.

SceneKnowledge is a knowledge-sharing system using a video-scene-linked bulletin board [2] developed based on the SECI model for knowledge management. It can divide a video into semantic units known as scenes, such as operation processes, and accept comments for each image scene. As Fig. 1 shows, Field Experiments in Social Networking Service Using a Knowledge Sharing System with Nursing Skill Videos. [3] And the functions of the system help users find and share knowledge included in images by displaying posted comments, which are linked to each video scene. After a verification experiment for clinical nurses in a general hospital [4] , the system has been used for knowledge management practice in training for nursing management. [5]

2.2. Practical Method for e-Learning

We videotaped the nursing skills to be addressed in the training in advance and uploaded the material contents onto a server running the e-learning system. Nine videos were created: intravenous injection, intratracheal aspiration, ventilator handling, tube feeding, diaper exchange, aspiration, central venous catheterization, blood transfusion, injection and vital signs, and lifesaving emergency treatment (ACLS, advanced cardiac life support; BLS, basic life support). Some of the materials created are shown in Fig. 1.

Before starting training for each nursing skill, we distributed handouts to new graduated nurses. As a pre-assignment, we asked them to watch e-learning videos related to a particular nursing skill and input comments on what they wanted to be careful about in their training. Only three computers in the library room were available for access to e-learning from the hospital. Therefore, an ID and password were distributed to each individual to enable them to access the e-learning materials from any internet-connected environment.Results show that new graduate nurses accessed the e-learning from their own homes and friends' homes [5] .Fig. 2 shows the e-learning computer station in the hospital library room.

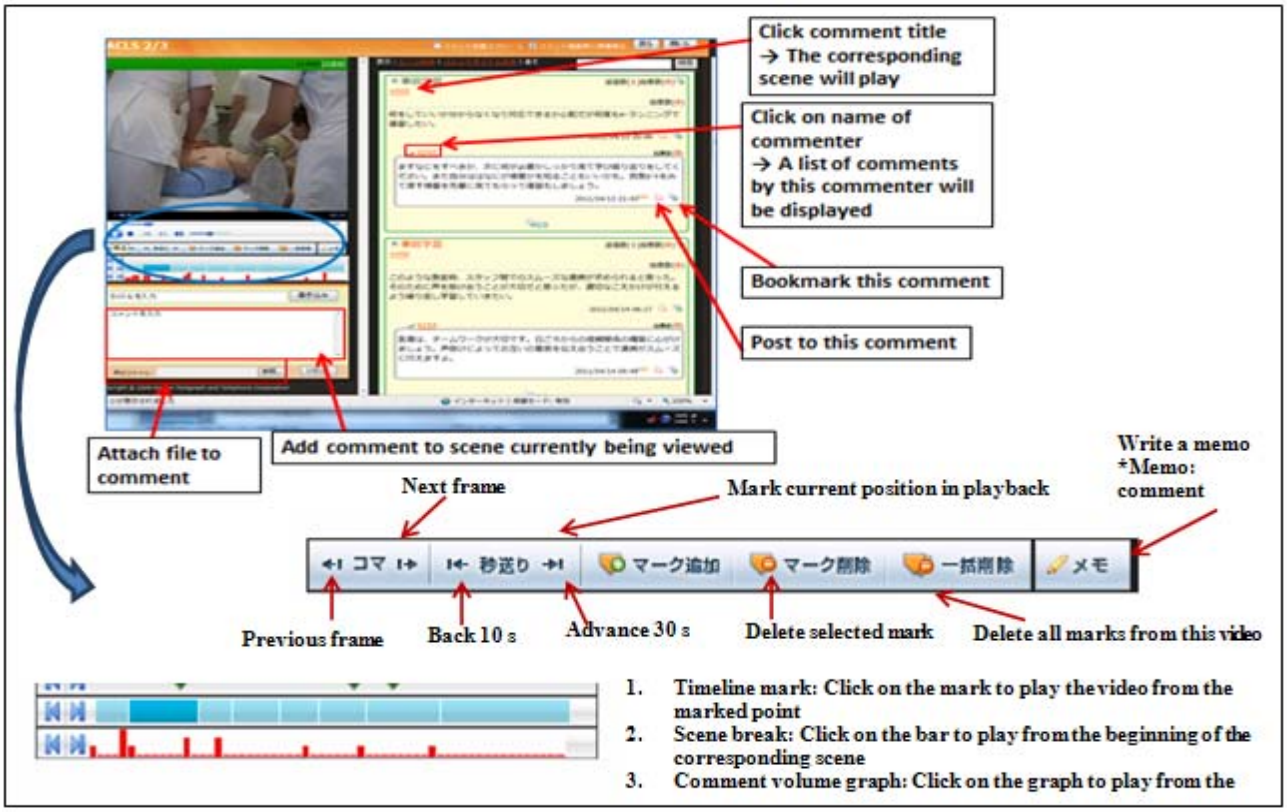

Fig. 1. Functions of Scene Knowledge (NTT Cyber Solution Laboratories e-learning system)

Fig.2. E-learning computerstation in the hospital library room.

3. Method of the study

This study first analyzed the access to the system by middle managers and nursing students, with particular emphasis on their writing. The survey period was from May 10, 2010, to January 24, 2011; log data recorded during the period were analyzed. Subsequently, the factors associated with the less frequent use of e-learning in middle managers compared with new graduated nurses were analyzed.

The study participants were 21 nursing middle managers who worked atI.Hospital and who gave their consent to participate. The survey, administered in November and December of 2010, used an original, self-administered questionnaire related to the use of the e-learning program. Middle managers were defined as nurse administrators (head nurses, chief nurses) responsible for a nursing unit of the clinical nursing department.

The survey items include 13 questions related to their attributes and the use of SceneKnowledge in e-learning and space for free-written comments.

In terms of ethical considerations, we provided written explanations of confidentiality, voluntary research cooperation, freedom of interruption, and release of results, and obtained their consent by collection of the answer sheets. This study was approved by the ethical committee of the hospital.

4. Results

4.1. Access to e-Learning

E-learning was used mainly for training of new graduate nurses. The number of visits from May 10, 2010, to January 24, 2011, is described below.

- Access by all users (Fig.3)

A total of 74 nurses accessed the system, consisting of 33 new graduate nurses (100%) and 41 other nurses (19.2%); a total of 42 registered comments, including 33 new graduate nurses (100%) and 9 other nurses (4.2%). The total number of visits was 2,129 (mean 28.8 times per person), and the total number of comments was 444 (mean 10.1 comments per person).

- Access by middle management (Fig.4)

Regarding head nurses, 16 (64%) accessed the system 259 times (16.2 cases per person); 4 (18.2%) wrote new comments 17 times (4.3 comments per person) and 3 wrote 45 reply comments (15 comments per person).

- Transition of the total number of comments during the research period (Fig.5)

We divided the transition of the writing status of comments during the research period into comments written by new graduate nurses and those by the middle management. Comments written by new graduate nurses increased at the implementation of the training, whereas those by the middle management increased after new graduate nurses were notified of the implementation of a practical exam.

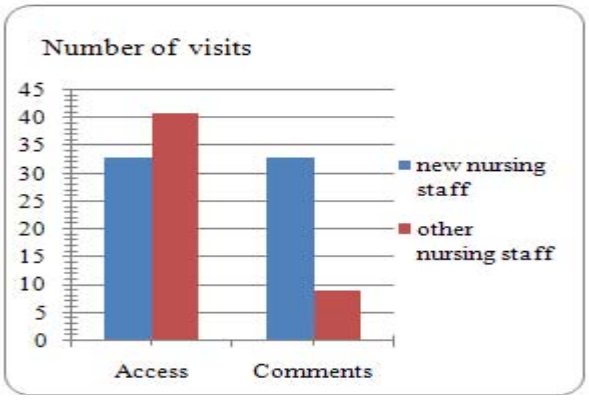

Fig. 3. User access to the entire system

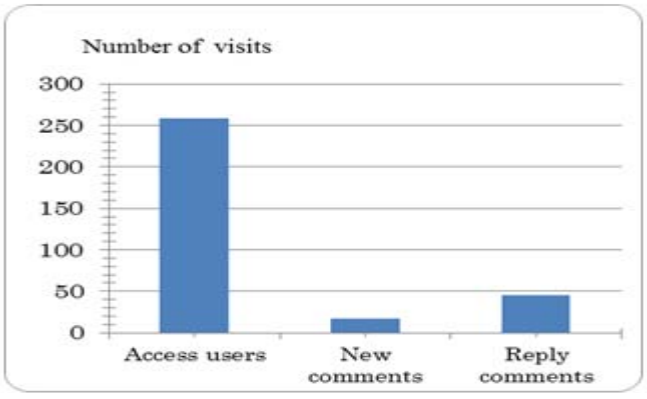

Fig. 4. Visits by nurse managers

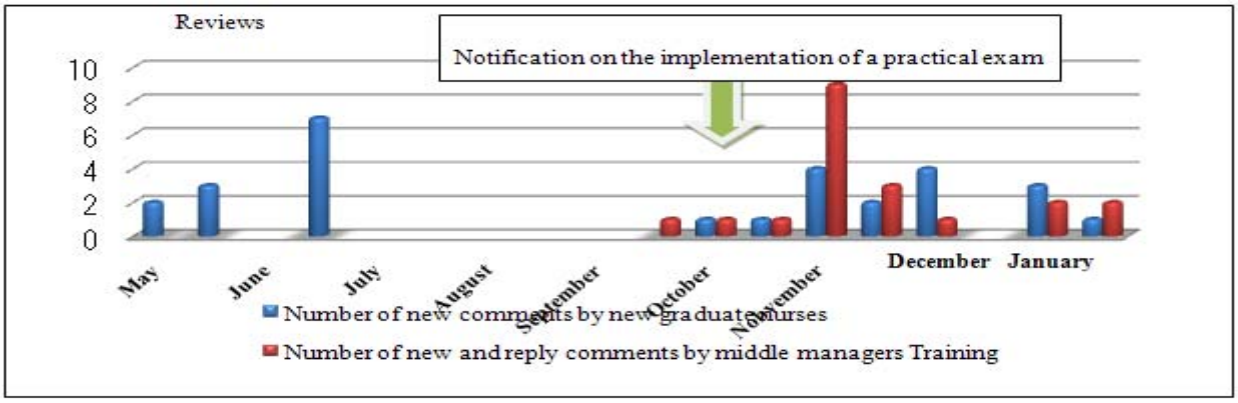

Fig. 5. Transition of the total number of comments during the research period

4.2. Participation in e-Learning

A total of 15 middle nursing managers submitted completed questionnaires (collection rate 71.4%).

The years of nursing experience of respondents ranged from 12 to 34 years, and their years of experience inI. Hospital ranged from 7 to 31 years.

Of the 15 middle nursing managers, only 4 watched video scenes and inputted comments, which revealed that they hardly used e-learning.The main reasons cited for not using e-learning were: “I cannot afford the time to write comments at both the workplace and home”; “I do not know what kind of comments I should write”; and “I do not know how to use my ID and password”, “The e-learning screen did not open up when I accessed it from home”, “Writing messages is troublesome”.

The 4 middle nursing managers who wrote comments work at the office for patient safety promotion at the facility and were in charge of education.

5. Discussion

With this e-learning system users can register comments such as pointers related to technical details of nursing, and thereby increase new nurses’ know-how while they watch the nursing skills videos. Considering that knowledge management would be achieved through such writing and browsing of the comments, we introduced this system with the expectation that middle management would be active participants. Nonetheless, middle managers, who have deeper knowledge of nursing practice, were unexpectedly less likely to write comments than new graduate nurses.

Inferring from the fact that head nurses participate in various committee activities and have numerous assignments on a daily basis, the problem of securing the time appeared to be a main reason for them. However, it is also possible that they might be willing to leave education for new graduate nurses to section head nurses or trainers, based on the division of roles. Further examination is necessary to clarify their interest in the development of newcomers and willingness to participate.

Furthermore, at the workplace, middle managers often underwent OJT in the new system while actually performing nursing practice as models of nursing practice. Their training may have been insufficient. Opinions were offered such as “I do not know how to use my ID and password.” They were unfamiliar with using the specific computers as well as the e-learning system. Therefore, it is necessary to devise ways to better familiarize them with the operation of the system.

In addition, answers such as “The e-learning screen did not open up when I accessed it from home” were found among the reasons for not using e-learning. Similarly to section head nurses, they might be unfamiliar with using computers and systems.

Although information education, which was included in the Ministry’s official guidelines for school teaching in 1992, has been implemented gradually, since 2002 subjects related to information technology have been introduced into high schools. Consequently, many middle management nurses belong to the generation that received no information technology education. The advancement of information and communication technology since their schooling, including the internet, has made e-learning common, but implementing it at medical sites is an ongoing challenge.

Furthermore, opinions such as “Writing messages is troublesome” and “I do not know what kind of contents I should include in my comments” were commonly found among answers from section head nurses and head nurses. This suggests that not only are the nurses unfamiliar with e-learning, but also that they have worries and concerns related to how others regard the content of their comments, and may fear that those who administer e-learning (the director and deputy director of nursing) “may evaluate me” depending on “what I have written.” They knew that only ID numbers, not real names, would appear on the screen where their comments were displayed and that personal information was protected. Nevertheless, they showed hesitation not only in instructing newly graduated nurses but also in training as a whole, and were thus reluctant to express opinions on their own nursing practice in an e-learning environment vastly different from past education settings.

In contrast, head nurses who were active in writing comments were considered to be motivated by the strong sense of professional mission, and were willing to make their comments universally known for the implementation of safe care, from the standpoint of responsibility for patient safety.

To promote the use of the e-learning by middle management, who have time constraints in both public and private life, the environment must be improved for them to be able to input comments immediately (perhaps requiring the installation of computers connected to the internet in each ward). In addition, giving frequent, detailed explanations and familiarizing them with the operation of the devices is necessary. In addition, because new graduate nurses wrote more comments before training periods and the practical exam, comments might be effective for providing feedback related to their results and for grasping opportunities to promote e-learning.

6. References

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