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E-Learning: A Solution for Problematic Classroom Computer Training.

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ABSTRACT

Classroom based computer training in hospitals can be problematic and a new approach is needed. Classroom training tends to maintain the same pace for all trainees. It is expensive and sometimes ineffective. It is not tailored to meet the needs of different groups or learners. A variety of e-learning strategies could enhance classroom computer training, and could be more effective for some learners. The first e-learning strategy, self-directed online learning tutorials allow the staff to study in their own best place, at their own best pace and according to their own best schedule. This flexibility eases learning anxiety and enhances the efficiency and effectiveness of learning. Second, hybrid e-learning strategies that include brief classroom learning could be implemented to reinforce the online learning and foster application skills. Third, computer literacy workshops would enhance hospital staff computer skills. Fourth, hospitals could collaborate with nursing schools to integrate nursing informatics within nursing education so graduates are prepared to work with computers within the work place. Lastly, strong leadership and management are important for a successful e-learning project implementation..

Key words: Computer Training in hospitals, E-Learning, Disadvantages of Classroom Computer Training, E-health strategies, nursing informatics

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I recently had a very stressful experience with staff computer training in a hospital. It was about electronic nursing documentation and lasted a whole day long. The instructor was very strict about her teaching pace: everyone was asked to click a specific key at the same time. She called your name if you navigated by yourself. She asked you to hurry up if you could not find a specific key. During the afternoon, we did a nursing case study. She got angry when we did not properly use F1 to F12. We laughed at her lack of nursing knowledge. There was an obvious tension in the classroom. When I walked out the door, I did not know how much information I had absorbed but I was expected to use this application the next day on my floor.

Introduction

My experience is not an isolated phenomenon. A lot of hospitals in Toronto today apply a similar training model. However, I believe that classroom based computer training is problematic and new approaches are warranted.

Classroom teaching tends to maintain the same pace for all trainees. This teaching orientation can be frustrating to people who have insufficient basic computer skills, and at the same time, insulting to others who have strong computer skills and want to go faster (Sanli 2005). This teaching approach ignores the different levels of computer

literacy of multi-generational health care teams as well as individual learning needs..

Moreover, classroom training is expensive and often ineffective. As a pre-scheduled class, classroom training causes loss of working hours and puts extra stress on hospital staff's busy schedules (Sanli 2005). One full day of training is inconsistent with the process of computer learning which requires time for reflection and practice. Most of the knowledge taught in the classroom is not really grasped by the trainees because there is no time for knowledge digestion and hands-on practice. In addition, non-clinical instructors can not effectively relate the general informatics rules to nursing clinical practice because

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they are unfamiliar with nursing knowledge and terminology.

Finally, classroom training is not tailored to meet the needs of different groups of learners. For example, most students who practice in the hospital for the first time have sophisticated computer skills but have no knowledge of clinical informatics applications. For these students, classroom training wastes time on step by step computer skills but ignores theory about the application of informatics in practice.

A variety of e-learning strategies could enhance classroom computer training, and could be more effective for some learners. First, a self-directed online learning tutorial should be provided to all staff of the hospital (Sanli 2005; Straight 2008; Sweeney, Saarmann, Seidman and Flagg 2006). A CD-ROM with the same material as the online tutorial could be given to staff who have difficulties accessing the internet (Sanli 2005). E-learning allows hospital staff to study in their own best place, at their own best pace and according to their own best schedule. This flexibility eases learning anxiety and enhances the efficiency and effectiveness of learning. In addition, e-learning enhances the standardization of training content, ensuring all staff emerge

with the same necessary knowledge (Sanli 2005).

The design of online learning should be carefully considered. Human factors need to be applied to make online learning an easy and pleasant journey (Abrams and Carr 2005; Nagle 2008). Different disciplines should use customized models which reflect the knowledge needed in their professions. Content should cover both techniques and ethical issues, and be updated constantly to reflect new applications.

The online learning should be divided into small modules, which allow the staff to complete a module in a short period of time, or skim some modules and jump to the next one as needed (Sanli 2005). Interactive practice should be provided at the end of every module as a self-evaluation tool. Learners should be rewarded with a continuing education credit after completion of the tutorial (Sweeney et al. 2006). Formative evaluation of e-learning should be carried out in a timely manner, and the feedback from the evaluation should be used to update the e-learning design (McGowan, Cossack and Poona 2008).

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Second, brief classroom learning should be implemented to reinforce the online learning and foster the application (Sanli 2005). It is usually best if it takes place after the online learning, focused on application to clinical practice (Sanli 2005). A professional should lead the class, someone who shares the same professional language and clinical practice of the trainees. The classroom section can serve as an evaluation session to ensure competency. A passing score should be set up that staff should reach before utilizing the application on the unit (Sanli 2005). Remediation classes or tutorials should be available to help staff who need extra hands-on practice to master an application.

Third, computer literacy workshops should be provided to enhance staff's computer skills. For instance, older staff may lack even basic computer skills such as keyboarding, navigating a web page, and using a database. They may need extra sessions to begin to learn these skills. An assessment survey is needed to determine the learning needs of each hospital staff member. A variety of computer literacy workshops should be established to meet the varied needs of the staff (Rosenfeld, Salazar-Riera and Vieira 2002).

Fourth, the hospital should collaborate with nursing schools to integrate nursing informatics within nursing education (Lau 2006; Nagle and Clarke 2004). The hospital should share knowledge with schools about the clinical applications of nursing informatics and encourage schools to evolve nursing curriculum which reflects current practice. A specific module of hospital online learning should be reserved for students. The hospital should encourage students to complete this module before their clinical practice (Sanli 2005). Bridging education and clinical practice facilitates smooth integration of the new generation into the work place and helps students adapt to informatics expectations of the institutions.

Lastly, strong leadership and management are important for a successful e-learning project. A multidisciplinary leadership team should include education, IT support, library, financial services, human resources, multidisciplinary professions, and other stakeholders (Nagle and Ormston 2003; Vanderbeek, Carson and Troy 2008). Leaders and managers should engage in a shared vision of e-learning. Clinical champions should be available for problem solving in all departments (Wu, Abrams,

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Baker and Rossos 2006).

All of the strategies presented facilitate a more positive, individualized and effective approach to computer training for hospital use. For one, the strategies help computer trainers avoid the type of ineffective training session described at the beginning of this paper.

They offer direction for ensuring that hospital staff feel less pressured and less rushed – they are able to take their time to learn the fundamentals of the system on an

individual basis, then reinforce their learning during classroom reinforcement and evaluation sessions.

Obviously, this complex approach to computer training takes time and resources to provide, but can help to ensure that hospital staff really do have the computer skills they need to engage fully in the informatics applications of their profession and the institution where they work.

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