



Nurses' perception and nursing satisfaction using "The Corner Competency System"☆



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Abstract

Objective: This study was to evaluate a Nurses' perception and nurse satisfaction as a result of the implemented of the Corner Competency System.

Method: This study was developed a prototyping corner system for nursing learning media. This research used a pre-experimental without control design in which 66 nurses were asked to express their perceptions toward the learning method; it then analyzed the responses by dependent *t*-test.

Result: Positive perception improvement after implementation of the system and the average improvement between 0.06 and 0.8. Satisfaction before implementation was 64.32, and after using system was 72.92 (SD: 11.05, $p=0.001$).

Conclusion: Many nurses have positive perception and felt more satisfied using Corner System that supported the blended model by the online learning and face to face approach. It is suggested that management improve its competency process by using an innovation model not only through the conventional face-to-face method but also through e-Learning methods.

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Introduction

Continuing Nurse Education is an important aspect of maintaining nurse competence. After completing their study and beginning work in the field, nurses should continue their education to improve their competence. They must keep up with the latest knowledge and technology in order to

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perform qualified and safe nursing care for patients and health providers.

Continuing Nurse Education (CNE) is a program that aims to develop nurse professional competence, which cannot be separated from nursing career advancement.¹ CNE is required for authority, and ongoing registration requirement, and the registration requirement is the key requirement for nursing career advancement. To earn clinical privilege, nurses must first establish their credentials.² Credential evaluation, in addition to clinical practice portfolio and competence logbook, should present a training record portfolio in accordance with nurses' expertise.³

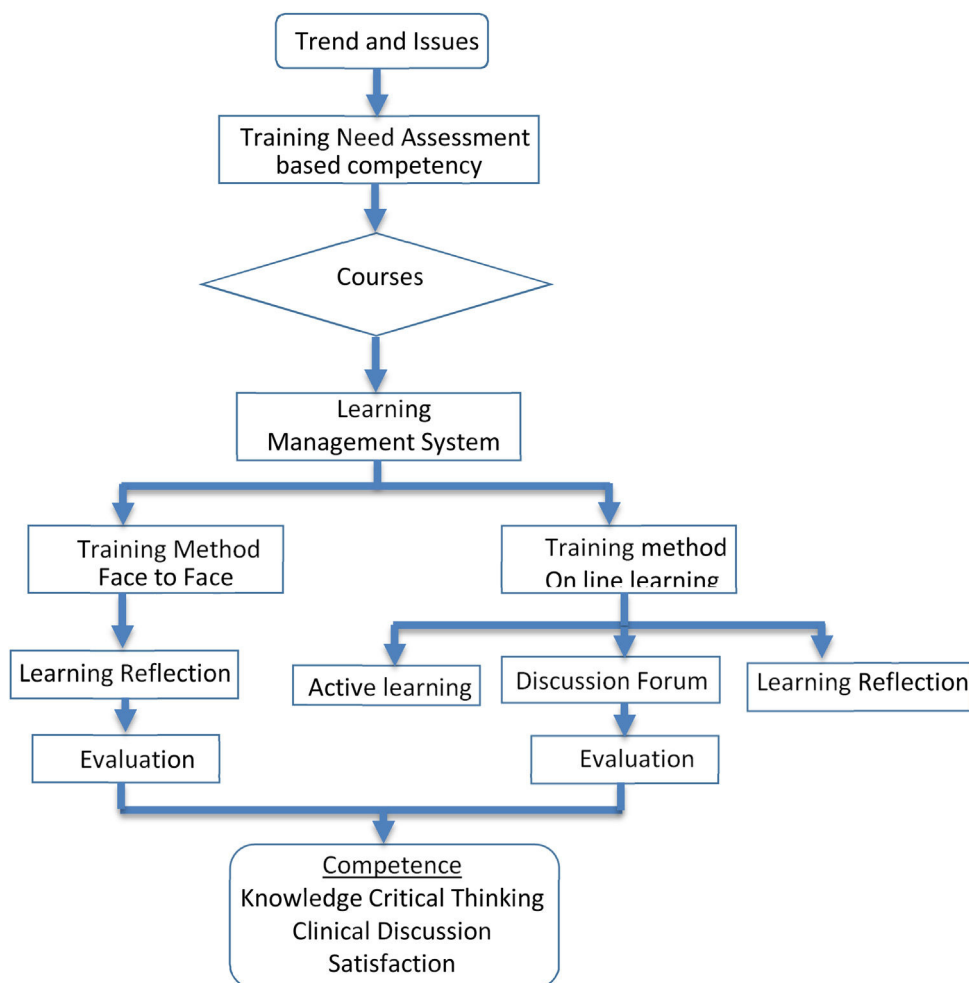
Clinical knowledge development is an indispensable foundation of clinical skill and clinical decision. On the professional career ladder, clinical knowledge and skill development were implemented continuously.¹ CNE and Continuing Professional Development may improve positive competence, clinical judgment skill, and patient satisfaction.¹

CNE may also improve knowledge, skill, attitude, and critical thinking competence. A previous study described the advantage of CNE for the improvement of safety, quality, and professionalism, as well as nurse professionalism and confidence.¹

A structured and well-managed CNE program will lead to valuable impact for nurses. In addition to professionalism improvement, CNE may provide learning convenience^{4,5} through work-related satisfaction as well as reduce boredom and turnover rates. A study was conducted in eight hospitals in Indonesia involving 1478 nurses. The results indicated a positive correlation between Continuing Professional Development and patient satisfaction ($R = 0.366, p < 0.01$), while a career development program indicated negative correlation ($R = -0.236, p = 0.001$). This negative correlation was potentially due to the absence of structured CPD development in the career path program, which resulted in unfulfilled nurses' expectations.⁶

The implementation of a CNE program poses some obstacles, such as requiring nurses to spend more time at work. Clinical nurses must follow the set shift schedule: training, seminar, and workshop, all of which were often conducted during the morning shift. The most frequent solution is training in the evening after or before work. Inflexible schedules become a problem in CNE implementation for nurses.^{1,7}

Another common issue is that the implementation of CNE does not meet nurses' needs if the Training Need Assessment was not conducted properly.⁸ Therefore, the organization should be sensitive to nurses' professional needs. Every



Picture 1 "The Corner Competency System." flow.

nurse has specific career-related needs, and each specific need differs from the next. The implementation of CNE was often not well-structured, nor was it capable of providing equal opportunity for all nurses; in addition, the available CNE was not in accordance with the professional nurse improvement and proposed difficulties with face-to-face attendance during the same specified time.

Several studies stated that CNE could be developed through the blended learning method, in which half of the courses were available online.^{7,9} This study aims to evaluate the nurse perception after being actively involved in the CNE program using the "The Corner Competency System." model. "The Corner Competency System" is a model of nurse professional competence improvement using a developed model in accordance with the user assessment, followed by learning method preference, direct implementation, and the evaluation of satisfactory perception toward "The Corner Competency System."

Method

This research was divided into three stages. The first stage was conducted by the quantitative approach to explore learning needs and obstacles as well as preferred learning methods. Focus Group discussion with 12 nursing manager, head nurses from 8 hospitals identified topics and model of learning. The second stage involved developing a prototype model for "The Corner Competency System." by placing nurses and their managers at the center of this competence. "The Corner Competency System." is a program offered for the improvement of nurse competence through discussion forums, conventional training requiring participant attendance, and online learning. Following the implementation of competence improvement, reflective learning and discussion were continued through media technology.

The third stage involved evaluating the implementation of the corner system using a quasi-experiment in which pre- and post-corner system implementation were compared without control. The evaluated after two months using the corner system Sixty-six nurses were evaluated to gather their satisfaction regarding the competence improvement model before and after the implementation of the "The Corner Competency System." system.

"The Corner Competency System." was developed as a trial based in a computer laboratory, initially tested on dummy data, and then finally distributed to 66 nurses. The system contains five major aspects of competence development: (1) face-to-face training system with a selected topic in accordance with Training Need Assessment (TNA), (2) online training system also developed in accordance with TNA, (3) online evaluation system to evaluate nurse attitude while following the online learning of competence improvement and reflective learning, (4) reflective learning to develop experience-based competence during learning activities and follow-ups, and (5) competence logbook documentation system to record nurse competence.

Preceding the implementation of the corner system, nurses were asked to express their opinions relative to the current competence system within their workplace. Subsequently, training was initiated to explain the system objective and mode of operation. Face-to-face training was

conducted 2 × 8 h, while online training and self-learning were conducted over the course of 1.5 months. After 45 days of implementation, a post-test was conducted to evaluate general satisfaction as well as the satisfaction of system acceptance. The entire pre- and post-collective data indicated the normal distribution and were analyzed using *t*-test dependent.

Ethical approval was obtained from the institutional review board prior to the commencement of the study, No. 242/UN2/F12D/HKP.02.04/2017. Related to the ethical approach, this research assured that all advantages, data, score results, and learning evaluation were confidential and anonymous. The evaluation results from the system were used as a recommendation for CNE implementation.

"The Corner Competency System." System

"The Corner Competency System." is a system to improve nurse competence through discussion forums, conventional and online training, reflective learning, and technology-based discussion (Picture 1).

"The Corner Competency System." is a program developed to maintain and develop nurse competence. Competence is a complement of knowledge, experience, skill, attitude, and decision-making ability; competence should be shaped and developed. "The Corner Competency System." is an element belonging to Continuous Professional Development and was developed based on a management system. The development referred to policy, knowledge, and evidence-based trending issues. The selection process was conducted by a nurse manager, whereby the selected courses were then assessed based on staff needs and competence levels. This stage was called "Training Need Assessment". When all selected courses were then listed, the nurse manager created the learning management system to determine the appropriate learning delivery method.

There were two models: (1) conventional face-to-face model with pre- and post-test evaluation, and (2) online (reflective) learning. The start program was conducted using face to face after that using on line learning. The online learning model was selected to facilitate nurses in managing their time for learning and maintaining flexibility without compromising work performance. The online learning system consisted of course materials, discussion forums, evaluation, and reflective learning opportunities. This model is expected to improve nurse competence; therefore, at the beginning of implementation, nurses were evaluated for their critical thinking, clinical decision-making, and satisfaction. The evaluation was implemented using questionnaires, which could further be developed as a practical instrument, longitudinal observation, or prospective evaluation.

Results

The nurses involved in this research were not only nurse practitioner but also head nurses and members of the nurse committee. The characteristic description of the respondents was as follows.

Table 1 describes the characteristics of respondents, where most respondents were female and graduated from a

Table 1 Nurse characteristics based on gender, occupation, and education ($N=66$).

Variable	Quantity	Frequency
<i>Gender</i>		
Male	2	3.03
Female	64	96.97
<i>Occupation</i>		
Head of division	3	4.5
Section chief	3	4.5
Unit chief	14	21.28
Nurse committee	6	9.1
Nurse practitioner	40	60.61
<i>Education</i>		
Nurse specialist	1	1.5
Bachelor of nursing	27	40.9
Nursing diploma	38	57.6

nursing diploma. Regarding their position in the ward, most were a nurse practitioner.

Table 2 describes the positive improvement of perception toward guidance, mentoring, continuing education improvement, career advancement, and quality. The average improvement was between 0.06–0.8.

Table 3 shows a significant difference in satisfactory perception between the conventional and “The Corner Competency System.” systems, indicated by the increase of 8.59% from 64.32 to >70 ($p=0.0001$).

Discussion

Continuing Nurse Education is an element of Nursing Professional Development that cannot be separated from the competence issue. Competence should be maintained and developed regularly in order to maintain safety for patients and nurses as well as to assure quality care. The researcher developed the “The Corner Competency System.” model,” refers to a tool in which one should improve one’s competence level. As a learning system, effective management should be applied in order to support competence development and sustainability. The previous research confirmed that Professional Tract Development was useful for improving learning activity, professionalism, mentoring, and certification.¹⁰ Similar research also stated that professional improvement could be achieved through Continuing Professional Development.^{11–13}

The “The Corner Competency System.” model was developed by applying a blended learning model—i.e. face-to-face and eLearning—which aimed to improve time and location flexibility. Every nurse received a username and password specific to their individual account within the management system. Online learning was complemented by courses, discussion, evaluation, and reflective learning. The flexibility of time and location touches on the previous study that stated such flexibility might help nurses manage their limited time.^{1,6,7,14} Online learning could also motivate nurses to become more proactive about learning and discovering resources.^{3,15}

“The Corner Competency System.” encouraged and enabled nurses to more actively engage in learning. The role of mentor and advisor during learning activity motivated the nurses. Quick responses when answering questions during discussion also supported the learning process, although it was not synchronous.^{7,9} Asynchronous learning may be the result of the face-to-face learning model because online learning depended on each learner’s effort. The role of facilitator, in this research, was to motivate and provide information about new courses and evaluation. Due to the role of facilitator in online learning, following the implementation of “The Corner Competency System.”, The respondents stated that their satisfaction levels were increased compared to the role of facilitator in face-to-face learning. The facilitator on the on line could fast response, and the response from facilitator can share to the other.

There was positive perception improvement toward the course selection in accordance with career level, professional development, and quality. Such improvement was due to the participation of nurse stakeholders and managers during course selection prior to Continuing Nurse Education’s commencement. This research was in line with the previous research, which stated that CNE should begin with the TNA in order to meet the professional development needs.^{3,10}

The satisfaction trend of CNE with the “The Corner Competency System.” method along with the implementation of online learning provided the nurses with excitement and motivation. Online learning could facilitate nurses’ learning as an alternative method of learning without being required to neglect their work responsibilities despite network access and limited time. They reaped benefits through CNE because, in addition to improving competence, CNE was required to improve their career and earn recertification of nursing license in Indonesia. These benefits of CNE agree with the previous research, claiming that CNE was strongly related to career advancement and ongoing certification requirement.^{6,8}

There was a significant difference in satisfactory perception following the implementation of “The Corner Competency System.” ($p=0.001$). This increase was due to nurses receiving facilitation within a location in which to improve their competence. The nurses previously utilized a conventional method that required them to physically sit in during training sessions, seminars, and workshops. The satisfaction of time and location flexibility also led to increased community and outreach learning. Such positive conditions could enable interpersonal discussion between nurses. In conventional learning, the maximum participant size was twenty, but in online learning, the number of participants could increase. These findings support the previous research that stated a telehealth method could increase the number of individuals within a learning community.^{16–18}

In the “The Corner Competency System.”, CNE was also complemented by reflective learning. Reflective learning could help identify experiences, obstacles, and analyses relative to improving the learning process. The previous research also stated that reflective learning could help facilitate new learning situations and the understanding of lessons.¹⁶

“The Corner Competency System.” is useful for nurse competence development. A good management system would provide an opportunity for developing competence

Table 2 Positive perception improvement after the implementation of "The Corner Competency System."

Variable	Mean	Mean diff	SD	CI 95%
<i>Competency system guide</i>				
Pre-	2.37		0.618	2.37–2.68
Post-	3.17	+0.8	0.49	3.05–3.29
<i>CNE supportive competence system</i>				
Pre-	3.29		0.33	3.13–3.45
Post-	3.35	+0.06		3.22–3.47
<i>Competence system based on career</i>				
Pre-	2.75		0.59	2.60–2.90
Post-	2.81	+0.06	0.56	2.67–2.99
<i>Mentor guidance</i>				
Pre-	2.52		0.62	2.37–2.68
Post-	3.24	+0.72	0.53	3.10–3.37
<i>Competence and quality</i>				
Pre-	2.78		0.55	2.04–2.92
Post-	3.38	+0.6	3.83	2.41–4.35

Table 3 Satisfactory perception difference between conventional competency system and "The Corner Competency System." (N = 66).

Variable	Mean	Difference	SD	CI 95%	p
Pre-	64.32	–8.59	11.06	–11.46 sd–5.73	0.0001
Post-	72.92				

and reducing the difficulty of nurses' professional development. Nurses need to develop their professional skills and abilities because professionalism is the key to providing quality care for their patients.^{3,17} Such professionalism should be improved in order to assure a high quality of nursing care.

Although "The Corner Competency System." has many benefits, this does not mean there are no issues. Independent learning could be a problem for a person who is not accustomed to learning independently. Paid access technology may also become a problem for the respondents. These problems referred to the previous research that found active learning could pose problems for learners who previously used the conventional method of learning, while Internet infrastructure could pose a problem for the blended learning model.^{18,19}

The limitation of this study was the number of participants, originally 72, that decreased to 66 individuals capable of completing the "The Corner Competency System." program and receiving an evaluation. The respondent selection was an incidental sampling because it was selected by the manager and with inclusion criteria. Satisfaction and perception of "The Corner Competency System." has only been conducted once after the 1.5 months. Therefore it does not accurately convey the continuing motivation or boredom in participants over a longer period. Further research is necessary to reevaluate the perception regarding the implementation of "The Corner Competency System.". The evaluation of "The Corner Competency System." was gathered using a questionnaire, which therefore requires a

follow-up of practical review and observation to evaluate the competency improvement.

"The Corner Competency System." The system was developed as a place to improve nurse competence. The competence system was presented by two models of learning: face-to-face (conventional) and eLearning-based (online) learning. Face-to-face learning comprised the materials, evaluation, and reflective learning; meanwhile, eLearning comprised courses, discussion forum, evaluation, and reflective learning. Course preparation conducted the Training Need Assessment and selected the appropriate method, such as which course would be presented for face-to-face learning and which topic would be utilized for eLearning. There was satisfaction improvement for the roles of both facilitator and mentor through "The Corner Competency System." as well as benefits for career advancement and CNE. The improvement was mainly caused by the flexibility of learning time and fast response from Facilitator, while the obstacles that remained were related to Internet infrastructure and the habit of the conventional learning method that altered the independent learning process.

The implication of this research is that the corner system could be an alternative method for improving professionalism. "The Corner Competency System." could also be an alternative model of Continuing Nurse Education, which mostly utilizes the conventional method. In "The Corner Competency System.", eLearning could be developed to support nurse competence by improving professionalism. The role of the manager is also required to manage the competence improvement process and to learn

management system by conducting the Training Need Assessment, selecting the appropriate method, evaluating the results, and reflecting the competence improvement.

Conflict of interests

The authors declare no conflict of interest.

References

1. Hariyati RTS, Safril S. The relationship between nurses' job satisfaction and continuing professional development. *Enferm Clin*. 2018;28S, [http://dx.doi.org/10.1016/S1130-8621\(18\)30055-X](http://dx.doi.org/10.1016/S1130-8621(18)30055-X).
2. Katsikitis M, Mcallister M, Sharman R, Raith L, Faithfull-Byrne A, Priaux R. Continuing professional development in nursing in Australia: current awareness, practice and future directions. *Contemp Nurse*. 2013;45:33–46, <http://dx.doi.org/10.5172/conu.2013.45.1.33>.
3. Hariyati RTS, Sutoto ID. Kresdensial dan Rekredensial Perawat.pdf [Internet]. Rajawali; 23 p. Available from: <http://lib.ui.ac.id/file?file=digital/2017-7/20453101-TutikSriHariyati-Kredensial.pdf>.
4. Nancarrow S. The impact of intermediate care services on job satisfaction, skills and career development opportunities. *J Clin Nurse*. 2007;16:1222–9, <http://dx.doi.org/10.1111/j.1365-2702.2007.01355.x>.
5. Perry B. Shine on: achieving career satisfaction as a registered nurse. *J Contin Educ Nurs*. 2008;39:17–25, <http://dx.doi.org/10.3928/00220124-20080101-06>.
6. Hariyati RTS, Igarashi K, Fujinami Y, Susilarningsih FS, Prayetni P. Correlation between Career ladder, continuing professional development and nurse satisfaction: a case study in Indonesia. *Int J Car Sci*. 2017;10:1490–7.
7. Leu LJ, Liao HC, Chang IC, Su ZY. Applying non-synchronized e-learning to the nursing clinical ladder system. *J Med Syst*. 2010;34:909–17, <http://dx.doi.org/10.1007/s10916-009-9306-5>.
8. Pennington H. Using a training needs analysis framework in career development. *Nurs Manage*. 2011;18:32–6, <http://dx.doi.org/10.7748/nm2011.05.18.2.32.c8485>.
9. Grady JL. The virtual clinical practicum: an innovative telehealth model for clinical nursing education. *Nurs Educ Perspect*. 2011;32:189–94.
10. Cieslak KR, Anderson RJ, Hanson BG, Korkowski SL, Ness DK, Nodrum JT. A professional development track program: a case report. *HPA Resour*. 2011;11:J9–17.
11. Pierson MA, Liggett C, Moore KS. Twenty years of experience with a clinical ladder: a tool for professional growth, evidence-based practice, recruitment, and retention. *J Contin Educ Nurs*. 2010;41:33–40, <http://dx.doi.org/10.3928/00220124-20091222-06>.
12. Takase M. The relationship between the levels of nurses' competence and the length of their clinical experience: a tentative model for nursing competence development. *J Clin Nurs*. 2013;22:1400–10, <http://dx.doi.org/10.1111/j.1365-2702.2012.04239.x>.
13. Burket TL, Felmlee M, Greider PJ, Hippensteel DM, Rohrer EA, Shay ML. Clinical ladder program evolution: journey from novice to expert to enhancing outcomes. *J Contin Educ Nurs*. 2010;41:369–74, <http://dx.doi.org/10.3928/00220124-20100503-07>.
14. Hariyati RTS. Pemanfaatan proses pembelajaran berbasis teknologi sebagai upaya peningkatan. *Jurnal Keperawatan Indonesia*. 2006;10:30–4, <http://dx.doi.org/10.7454/jki.v10i1.170>.
15. Kaminsky E, Rosenqvist U, Holmström I. Telenurses' understanding of work: detective or educator? *J Adv Nurs*. 2009;65:382–90, <http://dx.doi.org/10.1111/j.1365-2648.2008.04877.x>.
16. McConnell KA, Krisher LK, Lenssen M, Bunik M, Bunge Montes S, Domek GJ. Telehealth to expand community health nurse education in rural Guatemala: a pilot feasibility and acceptability evaluation. *Front Public Heal*. 2017;5:1–8, <http://dx.doi.org/10.3389/fpubh.2017.00060>.
17. Rizany I, Hariyati RTS, Handayani H. Factors that affect the development of nurses' competencies: a systematic review. *Enferm Clin*. 2018;28S, [http://dx.doi.org/10.1016/S1130-8621\(18\)30057-3](http://dx.doi.org/10.1016/S1130-8621(18)30057-3).
18. Hariyati RTS, Nurachmah E, Mulyono S. Developing distance learning method for health practitioner in Jakarta and its surroundings Indonesia. *Int J Educ Admin Policy Stud*. 2011;3:191–6, <http://dx.doi.org/10.5897/IJEAPS11.049>.
19. Shapiro HB, Lee CH, Roth NEW, Li K, Çetinkaya-Rundel M, Canelas DA. Understanding the massive open online course (MOOC) student experience: an examination of attitudes, motivations, and barriers. *Comput Educ*. 2017;110:35–50, <http://dx.doi.org/10.1016/j.compedu.2017.03.003>.