CLINICAL PRACTICE

Flipping the script: Assessing clinical judgement in student-led clinical evaluation

Michelle House-Kokan,* Farah Jetha

Department of Specialty Nursing, British Columbia Institute of Technology, Burnaby, Canada

Received: June 11, 2024 **Accepted:** August 20, 2024 **Online Published:** September 20, 2024
DOI: 10.5430/jnep.v15n1p8 **URL:** https://doi.org/10.5430/jnep.v15n1p8

ABSTRACT

Introduction and background: Strong clinical judgement and reflective thinking and practice are imperative to make safe, ethical clinical decisions, particularly in today's complex healthcare environment. Yet clinical judgement and underlying thinking are challenging to assess in post-licensure specialty nursing clinical education due to their complexity and invisibility.
Methods: Problem: Clinical evaluation can be subjective, based on observed behaviours rather than on assessment of thinking processes and clinical judgement underlying students' clinical decisions and actions. Approach: The BCIT Clinical Evaluation Tool (CET) and Evaluation Process (CET-EP) were developed using a shared accountability approach that shifts responsibility for demonstration of learning from instructor/preceptor to student, and facilitates the reflective thinking and practice necessary to develop clinical judgment.
Conclusions: Use of this CET-EP in post-licensure specialty certificate programs has assisted instructors, preceptors, and students to reach insights into learners' thinking, tailor learning interventions, and promote reflective practice, as well as provided greater objectivity in clinical evaluation.

Key Words: Clinical evaluation, Clinical judgement, Relational pedagogy, Reflective practice

1. INTRODUCTION AND BACKGROUND

The growing complexity of the health care environment and patient situations demands strong clinical judgement to effectively make clinical decisions. Evaluation of nurses' clinical competence, particularly their clinical judgement, is complex. Not simply a measure of observable psychomotor skills, evaluation of clinical competence must also include utilization of theoretical knowledge, clinical reasoning and thinking, and the ability to respond to a changing environment and patient situation, all while informing students of their progress.[1,2] Some of the difficulty of clinical evaluation is related to the limited ability within available tools to reveal the student's thinking underlying their actions and decisions in the clinical setting. Other difficulties include a lack of clear objective measures of required learning outcomes, particularly those related to clinical judgement, and various degrees of subjectivity inherent to many clinical evaluation approaches.

The BCIT Clinical Evaluation Tool and accompanying evaluation process (CET-EP) is an evidence-based template for more objective clinical assessment and evaluation in post-licensure specialty nursing education designed to promote reflective practice, clinical judgement and clinical decision making. Using a shared accountability perspective, our approach shifts the responsibility for demonstrating attainment of learning outcomes and competencies from the specialty nursing instructor to the specialty nursing student.[3] In this

*Correspondence: Michelle House-Kokan; Email: michelle_kokan@bcit.ca ; Address: Department of Specialty Nursing, British Columbia Institute of Technology, Burnaby, Canada.

article, we present the CET-EP and substantiate this approach to clinical evaluation through a review of its theoretical foundations. Further, we offer a practice-based exemplar to illustrate its utility in assessing and evaluating clinical judgement as well as practice.

Clinical evaluation is key to ensuring nursing students' application of knowledge, clinical reasoning and clinical judgment to ensure their clinical competence.[2] This multidimensional process includes consideration of cognitive, affective, and psychomotor learning, but many of these crucial components of clinical evaluation are complex and difficult to measure. This is particularly true of clinical judgement. Clinical judgement is the overarching concept in all nursing education that bridges specialty nursing theory with real-life nursing practice,[4] and encompasses the notion of "how nurses think".

Evaluating students' thinking in the clinical setting is often focused on observable behaviours rather than the clinical judgement and reasoning underlying the observed actions and interactions.[4] The subjectivity that results from relying on a clinical instructor's interpretation of students' actions introduces the risk of misinterpretation, that in turn can lead to inaccurate decisions about students.[5,6] This subjectivity is further compounded by individual clinical instructors' beliefs, values, and personal biases. In addition, the literature demonstrates that one of the many challenges in clinical evaluation stems from the use of vague criteria in student assessment.[4,7,8] The vaguer the criteria in clinical evaluation processes and tools, the more the assessment is influenced by instructors' subjective interpretations of the student.[7,8] Moreover, clinical instructors and preceptors are often not formally prepared in evaluation approaches and do not feel prepared to evaluate students' performance.[6,9]

In the context of post-licensure specialty nursing education, clinical evaluation becomes particularly challenging. Students are typically practicing RNs with established clinical decision-making processes, yet are moving from the role of expert or proficient clinician back to novice in a new specialty as a student. The transition from expert clinician back to novice is highly stressful and requires unique considerations tailored to their expertise levels as they construct their knowledge and thinking processes differently than undergraduate nursing students.[9–11] As experienced nurses, specialty nursing students' learning processes are constructivist in nature, and new knowledge is integrated with and differentiated from their experience. In contrast, the learning processes of pre-licensure nursing students tend to be contingent, based on concept formation and best-fit strategies grounded in memorization of specific content.[10,12,13] It is particularly challenging for the clinical instructor to assess and evaluate nurses who have established clinical expertise in a different practice area because these nurses construct their learning grounded in their practice experience, yet frequently lean on novice learning approaches and strategies as they develop context-specific knowledge and expertise.[10,14]

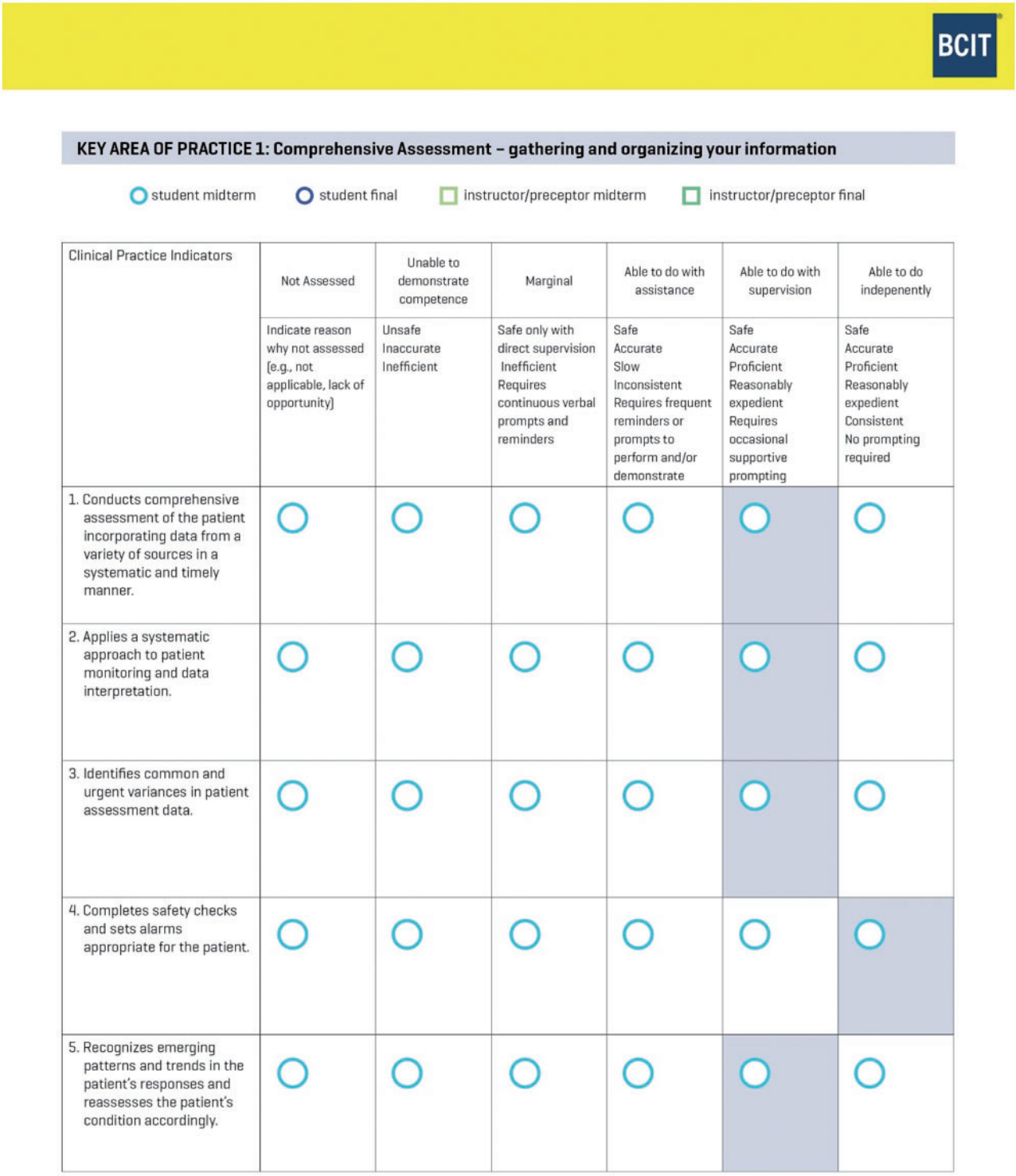
2. Development of the clinical evaluation tool and evaluation process

In British Columbia, the majority of post-licensure specialty nursing education is centralized and provided at our institute, with 11 specialty nursing certificate programs offered. Each program developed their own processes and tools for assessing and evaluating students' clinical performance over time. However, faculty recognized the need to create a standardized process that allowed for more objective assessment of clinical judgement, and uncovered the "why" behind students' thinking. This process needed to set clear expectations for the trajectory of learning, yet still engage the students in reflection and self-accountability for their learning. In a review of the literature, various clinical evaluation tools were examined for a focus on assessing clinical judgement for potential use.[1,2,5,15–18] While none were a fit with the desired purpose and specialized context, they served to inspire and inform the development of the CET-EP.

In recognition that implementing a standardized clinical evaluation process focused on assessing clinical judgement would be a significant shift in practice for many programs, the development process was informed by Kotter and Rathgeber's change framework.[19] We began with several all-faculty forums and workshops to set the stage for change and to connect and explore beliefs, values, and practices around clinical evaluation. From this exploration, we derived the foundation for how clinical evaluation would occur within the department. Formal guiding principles for this work were then articulated by synthesizing this foundation with current evidence on best practices related to what, how, why and when of clinical evaluation.

A review of all programs' evaluation documents, templates and processes was then completed and taken together with the data collected from the faculty forums and workshops. A core team of five faculty members conducted a thematic analysis[20] to identify and construct themes and subthemes, which represented the department's collective understanding of important areas to evaluate in clinical education. The overarching themes clarified seven Key Areas of Practice (KAPs) common to all specialty programs. Within each KAP, subthemes were categorized and aligned with the selected theoretical framework to ensure theoretical consistency, then

organized into clinical practice indicators that together exemplified all aspects of each KAP (example in Figure 1). The Bondy rating scale[4] was selected to represent the measuring criteria by which each indicator could be assessed.



BCIT

KEY AREA OF PRACTICE 1: Comprehensive Assessment – gathering and organizing your information

○ student midterm ○ student final □ instructor/preceptor midterm □ instructor/preceptor final

Clinical Practice Indicators	Not Assessed	Unable to demonstrate competence	Marginal	Able to do with assistance	Able to do with supervision	Able to do indepenently
	Indicate reason why not assessed (e.g., not applicable, lack of opportunity)	Unsafe Inaccurate Inefficient	Safe only with direct supervision Inefficient Requires continuous verbal prompts and reminders	Safe Accurate Slow Inconsistent Requires frequent reminders or prompts to perform and/or demonstrate	Safe Accurate Proficient Reasonably expedient Requires occasional supportive prompting	Safe Accurate Proficient Reasonably expedient Consistent No prompting required
1. Conducts comprehensive assessment of the patient incorporating data from a variety of sources in a systematic and timely manner.	○	○	○	○	○	○
2. Applies a systematic approach to patient monitoring and data interpretation.	○	○	○	○	○	○
3. Identifies common and urgent variances in patient assessment data.	○	○	○	○	○	○
4. Completes safety checks and sets alarms appropriate for the patient.	○	○	○	○	○	○
5. Recognizes emerging patterns and trends in the patient's responses and reassesses the patient's condition accordingly.	○	○	○	○	○	○

Figure 1. Example of key area of practice–comprehensive assessment

The process of how the tool would be used in practice was mapped out and documented prior to piloting its use to ensure reliability and consistency between clinical instructors. Once the process was documented and clinical instructors and preceptors oriented to its use, the CET-EP were trialled with one specialty program in two clinical courses. Feedback

from all parties was gathered, and adjustments made to the template accordingly. The CET-EP were then introduced to each specialty program over the course of a year. Feedback has been gathered through survey data and further revisions have been made, including the development of "Thinking Tools"[22] to support both instructors' and students' development of clinical judgement.

2.1 Theoretical foundations

The CET-EP are grounded in constructivism, reflective practice, and relational learning and pedagogy. Constructivism is a learning theory based on the idea that people actively construct or create their own knowledge based on their experiences.[23] Learners use their previous knowledge, experiences, beliefs and insights as a foundation to build upon.[24] However, reflective thought is also essential to learning. A method through which one becomes aware of one's implicit knowledge base and learns from one's experience,[25] two concepts are central to reflective practice: reflection-on-action is thinking about an experience after it has happened, while reflection-in-action takes place as one is engaged in the experience and modifies one's behaviour in that moment.[24,25] Reflection-in-action is what differentiates an expert practitioner from a novice. Similarly, Benner discusses intuitive knowing and thinking-in-action as defining characteristics of expert clinical nurses who can grasp a situation and understand what needs to be accomplished at that point in time.[12]

A key principle of constructivism related to social context is the collaborative nature of learning. Students learn with and from others, making meaning and constructing their own knowledge in the process.[24] Similarly, relational learning theory and pedagogy specify that a meaningful connection must be established between teachers, students, and peers for effective learning to take place,[26–28] providing further theoretical underpinnings to the development of both the CET and the evaluation process by supporting the premise of shared responsibility between instructor and student for learning.

The Situated Clinical Decision Making Framework (SCDMF)[29] was used as the theoretical framework to explicate the processes involved in clinical decision making and clinical judgement. This framework aligns with both Tanner's Clinical Judgement Model[30] and Caputi's approach to clinical evaluation.[16] However, it extends both models by the inclusion of the multi-layered context of clinical practice and therefore was more suitable for the post-licensure specialty nursing context. The SCDMF incorporates foundational knowledge, decision-making processes, thinking processes and the micro, meso, and macro levels of context. Foundational knowledge arises from various dimensions: the nursing profession, self, and aspects of the patient situation. The clinical decision-making process is triggered by the recognition of cues from the patient. The formation of a judgement, or the best conclusion the nurse can reach at a point in time with the available information, ensues. Forming a judgement impels the nurse to determine a course of action. Lastly, evaluation of outcomes occurs, where the nurse may return to any point in the decision-making process, or recognize the need for further assistance.[29] The inclusion of thinking processes in the framework highlights the contribution of critical, systematic, creative, and anticipatory thinking to clinical decision-making.[29] Importantly, it also differentiates thinking processes from foundational knowledge, assisting the clinical instructor to accurately identify and remediate learning issues arising in clinical education.

2.2 The clinical evaluation tool and evaluation process

The seven KAPs for the CET include comprehensive assessment, clinical judgement and decision-making, integration of theory to practice, reflective practice, professionalism, collaboration, and communication. Within each of these KAPs are clinical indicators that specify what is assessed and assist the student and clinical instructor/preceptor to understand the expectations of the clinical course(s), providing clarity for all parties involved. While the KAPs are presented as discrete topics, they are interrelated and all are crucial in the comprehensive evaluation of specialty-specific nursing practice. Each KAP's clinical indicators are assessed using the Bondy[21] measuring criteria. To provide transparency, each clinical indicator has the expected level of successful performance specified by a shaded box (see Figure 1). Formal evaluation of learning occurs at the midterm point and at the end of the clinical rotation.

The expectation for the clinical evaluation process requires students to take an active role. Students independently complete the CET, rating themselves and providing evidence of how they have met the required competencies for each KAP, using the clinical practice indicators and reflective examples to support their evaluation. To facilitate opportunities to practice reflection as well as to make the process manageable in terms of time and workload, students keep a learning log of various clinical experiences and decisions they have engaged in. Flipping the pedagogical approach from instructor-driven evaluation to student-driven promotes learners' reflective thinking and practice, and supports them to identify their own learning needs and goals.[16,31] Clinical instructors then corroborate or disagree with the student's self-evaluation, providing their own specific assessment. The CET is then

reviewed together by both student and instructor, providing an opportunity for dialogue around clinical practice, clinical judgement, and clinical decision-making specific to the student's individual needs.

3. Discussion and implications

Much of the benefit of the CET-EP derive from the guided conversation it facilitates at formal evaluation times. These guided clinical discussions allow both instructor and student to reach insights into contextual, knowledge, thinking and decision-making factors influencing the student's progress. These insights provide direction for educators in identifying students' specific areas of challenge and needs for support, allowing educators to tailor learning approaches and interventions to the unique needs of the individual student. Further, this process allows the student and instructor to have a shared understanding of the steps required to be successful, decreasing the perception of subjectivity in assessment. Importantly, it also creates space for the student to feel acknowledged, invested, and supported in their learning.[26,27]

Discussions generated from the CET-EP are not limited to times of formal summative evaluations. Using the tool on an ongoing basis fosters constructive and directed instructor-student dialogue throughout the clinical placement. Additionally, using the CET as a reflective tool throughout the clinical experience continues to build students' clinical judgement and capacity for reflective practice by providing practice opportunities.[15] Developing the ability to gain insight into their own thinking processes leads to higher levels of analysis, synthesis, and future clinical decision making practices,[12,32,33] potentially resulting in improved patient care outcomes.

While the CET-EP represent a more objective approach to clinical evaluation focusing on clinical judgement, the inherent comprehensiveness of this tool and process may be construed as a barrier to their use. Students require time to reflect in order to complete the CET-EP. However, recognizing that the CET-EP function as an ongoing learning opportunity rather than a task that takes away from practice at the bedside, clinical educators can create space within their clinical courses for the students to complete the work. Further, utilizing the tool as a reflective touchpoint throughout the clinical course provides the students with ongoing opportunities to build on their self-assessment.

It is important for clinical educators and preceptors as well as students to be comprehensively oriented to the CET-EP. The onus of responsibility for demonstrating learning is placed on the student rather than the instructor, and this student-driven approach is very different than traditional approaches. The expectations of the roles of the student and of the instructor/preceptor are different in a pedagogical approach that emphasizes a shared responsibility for learning.

4. Conclusion

The CET-EP described here are designed to assess and evaluate learning in specialty nursing clinical education with less subjectivity, as well as simultaneously promote reflective practice and clinical judgement. Although the CET-EP have been successfully applied in the post-licensure specialty nursing education context, their utility in achieving the intended goals requires empirical testing. The tool is currently designed based on competencies for post-licensure specialty nursing, but could be adjusted and customized to competencies for other contexts. We recognize that the CET-EP are an ongoing work-in-progress, and offer them here with the anticipation that others may critique, adopt, or refine the tool and/or the process for use in other nursing education spaces.

Increasing patient acuity and complexity together with the challenges of the current health care environment require strong clinical judgement for effective clinical decision-making and safe patient care. The CET-EP have been highly valuable in post-licensure specialty nursing clinical education. By fostering a shared accountability approach, the CET-EP effectively transfers the responsibility of demonstrating learning from instructors and preceptors to students. This innovative tool and process not only aids in uncovering the intricate and often invisible aspects of clinical judgment and thinking but also enhances the objectivity of clinical evaluation. The resultant facilitation of deep insights into students' thought processes enables tailored learning interventions and promotes reflective practice, ultimately leading to safer and more ethical clinical decision-making.

5. Case exemplar

Logan is a Registered Nurse (RN) with several years of experience in Emergency who is now enrolled in the Perinatal Nursing Specialty program. This is a new practice area for Logan. As Logan begins their first clinical course, they state to their clinical instructor that they feel confident performing systematic comprehensive assessments on patients. Moreover, with years of experience, Logan feels competent with communication, documentation, and building effective relationships with patients, families and members of the multidisciplinary team. Mandeep has been a clinical instructor for one year, and feels a bit nervous to be working with an experienced nurse. Logan is eager to start their clinical experience and expresses that they did not need support or

supervision in this new specialty area of practice in relation to many of the identified KAPs. Mandeep is unsure of how to manage this dynamic as a novice clinical instructor, but is determined to ensure she accurately and objectively assesses Logan and provides timely feedback and tailored support.

In the first week of the rotation, Mandeep notes that Logan seems to be progressing well, building effective relationships with patients and families, appearing to perform comprehensive assessments, and keeping up with tasks and related documentation. However, Mandeep feels uncertain of her assessment as Logan is consistently busy or unavailable whenever Mandeep approaches for a discussion, and seems to be avoiding her. When Mandeep does connect with Logan to review their patients, she finds Logan is unable to comprehensively respond to her questions about the nursing priorities after receiving report and after their patient assessment. To inquire into Logan's thinking related to nursing priorities and clinical decisions, Mandeep asks Logan to describe why they made the decisions that they had, but Logan struggles to articulate their rationale. Mandeep then adds "what if" questions to explore Logan's anticipatory thinking, such as "what if the patient was bleeding heavily after birth, what would be your immediate priority?" Logan is silent, but repetitively states that they are an experienced and competent RN. Mandeep acknowledges Logan's experience, then reviews the CET's KAPs and associated clinical indicators with Logan. Together, they identify communication, collaboration, documentation, and aspects of comprehensive assessment as Logan's strengths. Using the KAPs as a roadmap, Logan and Mandeep also identify areas for improvement related to clinical judgement and decision-making and specifically integration of theory to practice, with the measurement criteria clearly outlining where Logan needs to make progress. Logan shares that reviewing the CET KAPs and clinical indicators assisted them in reflecting on their practice so far and provided clarity of the expectations for the clinical course. Coupled with Mandeep's feedback, the CET supports Logan to understand that while they were meeting expectations in some areas of clinical decision-making, there were specific aspects that required improvement, particularly in terms of thinking ahead and setting priorities. Logan confides that with their previous nursing experience, 'doing' tasks related to patient care came easily to them, but that they had been avoiding clinical discussions with Mandeep due to a fear of being judged for being an experienced RN yet still having many questions related to Perinatal nursing practice. Using the CET as a guide, Mandeep further clarifies expectations of the role of the learner according to the clinical indicators, and Logan and Mandeep together use the CET to map out shared learning goals and strategies to meet them over the remaining clinical shifts. Mandeep reflects on this experience to realize that learners' observable behaviours are not sufficient for an accurate assessment. While Logan appeared to be 'doing' and 'acting' like a learner who was progressing as expected, the components of the CET related to clinical judgement and decision-making provided a roadmap for the novice clinical instructor to assess the learner's thinking behind their tasks and nursing care and identify significant gaps.

Acknowledgements

The authors would like to acknowledge Nancy Hewer, Tara Hodgson, Lara Parker and Lauren Schutte for the valuable work in developing the original versions of the BCIT Clinical Evaluation Tool and Evaluation Process.

Authors contributions

Dr. M. House-Kokan drafted the manuscript and Ms. F. Jetha revised it. Both authors read and approved the final manuscript. Both authors contributed equally to the development of the BCIT Clinical Evaluation Tool and Evaluation Process and its operationalization.

Funding

Not applicable.

Conflicts of Interest Disclosure

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Not applicable.

Ethics approval

The Publication Ethics Committee of the Sciedu Press. The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

REFERENCES

[1] Skúladóttir H, Svavarsdóttir M. Development and validation of a clinical assessment tool for nursing education. Nurse Educ Prac. 2016 Sep; 20: 31-38. https://doi.org/10.1016/j.nepr.2016.06.008

[2] Walsh T, Jairath N, Paterson MA, et al. Quality and safety education for nurses clinical evaluation tool. J Nurs Educ. 2010 Jun; 49(9): 517-522. https://doi.org/10.3928/01484834-20100630-06

[3] Barrett AM, Krieg CB, Kinney S, et al. The clinical portfolio: a success story in critical thinking. In Caputi L, editor. Innovations in nursing education: building the future of nursing. National League for Nursing. 2014; 95-98.

[4] Caputi L. Dr. Caputi's principles for nurse educators: a guide for teaching nursing. Chicago: Windy City Publishers. 2023.

[5] Lewallen L, Van Horn E. The state of the science on clinical evaluation in nursing education. Nurs Educ Perspec. 2019 Jan-Feb; 40(1): 4-10. https://doi.org/10.1097/01.NEP.0000000000000376

[6] Smith B. Experiences of clinical evaluation: the meaning for nursing students. [Dissertation].[Indiana]: University of Pennsylvania; 2019.

[7] Finstad I, Knutstad U, Havnes A, Sagbakken M. The paradox of an expected level: the assessment of nursing students during clinical practice – a qualitative study. Nurs Educ Prac. 2022 May; 61: 103332–103332. https://doi.org/10.1016/j.nepr.2022.103332

[8] Helminen K, Tossavainen K, Turunen H. Assessing clinical practice of student nurses: views of teachers, mentors and students. Nurs Educ Today. 2014 Aug; 34(8): 1161-1166. https://doi.org/10.1016/j.nedt.2014.04.007

[9] House-Kokan M. Beyond role transition: specialty nurses' narratives of learning to teach. [Dissertation]. [Calgary]: University of Calgary; 2023. Proquest Dissertations and Theses Global.

[10] Daley B. Novice to expert: an exploration of how professionals learn. Adul Educ Quar. 1999Summer; 49(4): 133-147. https://doi.org/10.1177/074171369904900401

[11] Dunbar G, Kawar L, Scruth EA. The transition from expert to novice and back to expert. Clin Nurs Spec. 2019 May-Jun; 33(3): 106-109. https://doi.org/10.1097/NUR.0000000000000442

[12] Benner P. From novice to expert: excellence and power in clinical nursing practice. 2001. (Commemorative Edition). Prentice-Hall.

[13] Murray M, Sundin D, Cope V. Benner's model and Duchscher's theory: providing the framework for understanding new graduate nurses' transition to practice. Nurs Educ Prac. 2018 Dec; 34: 199-203. https://doi.org/10.1016/j.nepr.2018.12.003

[14] Jack BA, Kinloch K, O'Brien MR. Teaching nurses to teach: a qualitative study of nurses' perceptions of the impact of education and skills training to prepare them to teach end of life care. J Clin Nurs. 2019 Jan; 28(9-10): 1819-1828. https://doi.org/10.1111/jocn.14786

[15] Bourbonnais FF, Langford S, Giannantonio L. Development of a clinical evaluation tool for baccalaureate nursing students. Nurs Educ Prac. 2008 Jan; 8(1): 62-71. https://doi.org/10.1016/j.nepr.2007.06.005

[16] Caputi L. Caputi's alternative approach to clinical evaluation. In Oermann MH, De Gagne JC, Phillips BC, editors. Teaching in nursing and role of the educator: the complete guide to best practice in teaching, evaluation, and curriculum development. 2018. 2nd edition. New York (NY): Springer. p. 435-439.

[17] Karayurt Ö, Mert H, Beser A. A study on development of a scale to assess nursing students' performance in clinical settings. J Clin Nurs. 2009 Mar; 18(8): 1123-1130. https://doi.org/10.1111/j.1365-2702.2008.02417.x

[18] Ulfvarson J, Oxelmark L. Developing an assessment tool for intended learning outcomes in clinical practice for nursing students. Nurs Educ Today. 2012 Aug; 32(6): 703–708. https://doi.org/10.1016/j.nedt.2011.09.010

[19] Kotter J, Rathgeber H. Our iceberg is melting. 2017. New York: Penguin.

[20] Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psych. 2006; 3(2): 77-101. https://doi.org/10.1191/1478088706qp063oa

[21] Bondy KN. Criterion-referenced definitions for rating scales in clinical evaluation. J Nurs Educ. 1983 Nov; 22(9): 376-382. https://doi.org/10.3928/0148-4834-19831101-04

[22] House-Kokan M, Jetha F. Teaching to learn, learning to teach: clinical thinking tools to support novice clinical educators, preceptors, and students. J Nurs Educ Pract. 2024 May; 14(5). https://doi.org/10.5430/jnep.v14n5p23

[23] Dewey J. How we think. 1910. D.C. Heath & Co. Available: Dewey1910HowWeThink

[24] Merriam S B, Bierema LL. Adult learning: linking theory and practice. 2014. Jossey-Bass.

[25] Schön DA. The reflective practitioner. 1983. Basic Books, Inc.

[26] Bovill C. Co-creating learning and teaching: towards relational pedagogy in higher education. 2020. Critical Publishing.

[27] Groen J, Kawalilak C. Relational learning. In Rocco T, Smith MC, Mizzi RC, Merriweather LC, Hawley JD, editors. The handbook of adult and continuing education. 2020. New York: Stylus Publishing, LLC. p. 73-80.

[28] Doane G, Varcoe C. (2007). Relational practice and nursing obligations. Adv Nurs Sci. 2007 Jul-Sep; 30(3): 192-205. https://doi.org/10.1097/01.ANS.0000286619.31398.fc

[29] Gillespie M, Paterson B. Helping novice nurses make effective clinical decisions: the situated clinical decision-making framework. 2009 May; 30(3): 164-170.

[30] Tanner C. Thinking like a nurse: a research-based model of clinical judgment in nursing. J. Nurs. Educ. 2006 Jun; 45(6): 204-212. https://doi.org/10.3928/01484834-20060601-04

[31] Sandmann LR. Adult learning and leading-a shared responsibility. Adul Learn. 1998 Sept; 9(3): 2. https://doi.org/10.1177/104515959800900301

[32] Benham B, Hawley D. The effectiveness of tools used to evaluate successful critical decision making skills for applicants to healthcare graduate educational programs: a systematic review. JBI Database of Systematic Reviews and Implementation Reports. 2015 Apr; 13(4): 231–275. https://doi.org/10.11124/jbisrir-2015-2322

[33] Sportsman S. Clinical judgement whitepaper. 2023. Elsevier.