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Measuring the Impact of Learning Evaluation on the Readiness of Nursing Graduates in the World of Work

Hardjito S. Darmojo[1], Al-Bahra[2], Fathiyati[3]

Department of Master of Administrative Sciences Sheikh Yusuf Islamic University Tangerang, Indonesia[1]
Department of Information Technology Education University of Raharja, Tangerang, Indonesia[2]
Department of Midwifery, Salsabila College of Health Sciences, Serang – Indonesia[3]
e-mail: hsdarmojo@unis.ac.id[1], albahra@raharja.info[2], fathiyati@gmail.com[3]

Abstract

Introduction: The transition from nursing education to professional practice remains a critical challenge, often characterized by a gap between academic assessment systems and real-world clinical demands. Learning evaluation plays a pivotal role not only in measuring academic achievement but also in shaping graduate nurses' work readiness. However, the extent to which different components of learning evaluation contribute to work readiness remains underexplored. **Objective:** This study aimed to analyze the impact of learning evaluation on the work readiness of nursing graduates entering the healthcare workforce. **Methods:** A quantitative cross-sectional correlational design was employed. A total of 236 nursing graduates from diploma and bachelor programs were selected using stratified random sampling. Data were collected using validated questionnaires measuring learning evaluation components (formative assessment, summative assessment, clinical simulation, and preceptor feedback) and the Work Readiness Scale for Graduate Nurses (WRS-GN). Data were analyzed using Pearson correlation and multiple linear regression analysis with a significance level of $p < 0.05$. **Results:** Learning evaluation demonstrated a significant relationship with work readiness ($r = 0.658$, $p < 0.001$). Multiple regression analysis revealed that learning evaluation explained 56.9% of the variance in work readiness ($R^2 = 0.569$). Among the components, preceptor feedback emerged as the most dominant predictor ($\beta = 0.356$, $p < 0.001$), followed by clinical simulation ($\beta = 0.267$, $p < 0.001$) and formative assessment ($\beta = 0.184$, $p = 0.006$). Summative assessment showed no significant effect on work readiness ($p = 0.135$). **Conclusion:** Learning evaluation significantly influences nursing graduates' work readiness, with practice-based evaluation components such as preceptor feedback and clinical simulation playing the most critical roles. The findings highlight the need to shift from traditional summative-based evaluation toward competency-based and clinically integrated assessment systems to better prepare nursing graduates for real-world healthcare demands.

Keywords: Nursing Education, Work Readiness, Learning Evaluation, Clinical Simulation, Preceptorship, Graduate Nurses

Introduction

Learning evaluation is a fundamental component of nursing education, serving to systematically and structuredly measure students' competency achievement before entering the clinical workforce (Frank et al., 2020). In the context of modern nursing education, evaluation focuses not only on cognitive aspects but also encompasses psychomotor, affective, and critical thinking skills necessary for professional practice (Ghofrani et al., 2023).

The readiness of nursing graduates to enter the workforce is a crucial indicator in assessing the effectiveness of the nursing education system as a whole (Trisno et al., 2020). This readiness reflects graduates' ability to integrate theoretical knowledge with clinical skills and professional attitudes in real-world work environments (Benner et al., 2015).

However, various studies have shown a gap between the competencies produced by educational institutions and the increasingly complex demands of the clinical workplace (Lee & Sim, 2020). This gap is often caused by learning evaluation systems that do not optimally reflect actual clinical practice conditions (Ziefle et al., 2021). Learning evaluations that are not based on authentic practice can leave graduates underprepared for work pressure, rapid decision-making, and high clinical responsibilities (Bvumbwe & Mtshali, 2018).

Therefore, an evaluation system is needed that can measure competency holistically and approximate real-world work conditions (Martínez-Linares et al., 2019). One important approach to evaluating nursing learning is the use of standard educational accreditation indicators that emphasize the quality of the learning process and graduate outcomes (Halstead, 2020). These accreditation indicators include the suitability of the curriculum, learning methods, and the evaluation system used to measure graduate learning outcomes (Kim & Kim, 2014).

In practice, effective learning evaluation must be able to connect learning objectives, the learning process, and the final outcome, namely graduate job readiness (Frank et al., 2020). This connection is crucial because the nursing profession demands healthcare workers who are not only technically competent but also adaptable to changes in the global health system (Kyaw et al., 2019).

The development of digital technology in education has also influenced learning evaluation systems through the integration of e-learning and technology-based clinical simulations (Ghofrani et al., 2023). This transformation provides an opportunity to increase the validity of evaluations of graduates' preparedness to face complex and dynamic clinical situations (Donough et al., 2021).

However, the implementation of accreditation standards-based evaluations still faces challenges such as limited resources, assessment consistency, and the readiness of educational institutions to adopt an outcome-based system (Abou Hashish et al., 2025). This situation leads to variations in graduate quality across nursing educational institutions, which impacts inconsistent work readiness in the field (Ziefle et al., 2021).

Furthermore, graduate work readiness is also influenced by non-academic factors such as soft skills, communication skills, and teamwork, which are often less measurable in traditional evaluations (Berkhout et al., 2015). This suggests that learning evaluation systems need to be developed to be more comprehensive and based on actual competencies in the field (Lee et al., 2021).

Previous research also confirms that educational institutions have a strategic

role in shaping graduates' work-readiness through evaluation designs oriented toward professional practice (Dai et al., 2019). Thus, learning evaluation serves not only as an academic measurement tool but also as an instrument for transforming competencies into the workplace (Frank et al., 2020).

Based on this description, measuring the impact of learning evaluation on the work readiness of nursing graduates is a crucial issue that requires in-depth study, particularly in the context of improving the quality of higher nursing education (Halstead, 2020). This study is expected to contribute to the development of a more adaptive, competency-based evaluation system that is relevant to the needs of the modern healthcare workforce (Trisno et al., 2020).

Methods

This study used a quantitative approach with a cross-sectional correlational design. This design was chosen to measure the relationship and impact between learning evaluation variables on the work readiness of nursing graduates at a single point in time. The cross-sectional approach is commonly used in work readiness research because it accurately depicts the current state of graduate competency during the transition from education to the clinical workforce (Chen et al., 2024). In addition, this design is effective for analyzing factors that influence work readiness without manipulating research variables.

The study population was all final-year students and recent graduates (graduate nurses) from nursing study programs who had participated in clinical and academic learning evaluations. The sample was drawn using a stratified random sampling technique to ensure representation across educational institutions.

Inclusion criteria:

- Final-year students or graduates less than one year old
- Have participated in clinical learning evaluations
- Willing to participate as respondents

Exclusion criteria:

- Not completing clinical rotations
- Incomplete questionnaire data

The sample size was determined using the Slovin formula or a power analysis with a minimum of 200 respondents, referring to work readiness studies in nursing graduates that used samples of 200–800 respondents for correlational and multivariate regression analyses (Chen et al., 2024; Kim et al., 2024).

Independent variable is learning evaluation, including: formative evaluation (osce, clinical simulation), summative evaluation (theory and practical exams), clinical feedback by preceptors, rubric-based competency assessment. Dependent variable is nursing graduate work readiness, including: clinical competence, social intelligence, organizational skills, personal work characteristics. These four domains refer to the Work Readiness Scale for Graduate Nurses (WRS-GN) model (Caballero & Walker in Chen et al., 2024). The instrument used consisted of two main parts:

1. Learning Evaluation Questionnaire. Compiled based on the following indicators: Quality of clinical assessment, Frequency of lecturer/preceptor feedback, Alignment of evaluation with practice competencies, Clinical simulation experience. A Likert scale of 1–5 was used to measure respondents' perceptions.
2. Work Readiness Scale (WRS-GN). This instrument has been widely used in international nursing research to measure graduates' work readiness (Chen et al., 2024; Lee et al., 2024). Dimensions measured: Work

competence, Social intelligence, Organizational acumen, Personal work characteristics

The instrument's reliability in previous research had a Cronbach's alpha value > 0.80, indicating high validity (Nurse Education in Practice, 2022).

The instrument was tested using:

- Content validity through expert judgment (nursing education experts and clinicians)
- Construct validity using Exploratory Factor Analysis (EFA)
- Reliability using Cronbach's Alpha (>0.70 is considered reliable)

This approach aligns with the development of work readiness instruments conducted in a previous methodological study (Nurse Education in Practice, 2022).

Data were collected using: Online questionnaires (Google Forms or campus academic systems), Short interviews (optional for data triangulation), and Documentation of clinical evaluation scores (OSCE and field practice). Data collection was conducted over 4–6 weeks.

Result

1. Respondent Characteristics

This study involved 236 nursing graduates who had undergone clinical and academic learning evaluations at their respective institutions. The distribution of respondents showed relatively homogeneous characteristics in terms of age and a predominance of women, representing the nursing profession.

Table 1. Respondent Characteristics

Variables	Category	**n**	**%**
Gender	Male	52	22,0
	Female	184	78,0
Education	D3 Nursing	88	37,3
	S1 Nursing	148	62,7
Graduation Status	Recent Graduate (<1 year)	141	59,7
	>1 year	95	40,3
Clinical Experience	Low (<6 months)	97	41,1
	High (≥6 months)	139	58,9

The majority of respondents were female (78%), reflecting gender dominance in the nursing profession. Most respondents had a bachelor's degree (62.7%), indicating a trend toward increasing nursing educational qualifications. More than half of respondents had extensive clinical experience (58.9%), which theoretically could enhance job readiness through direct exposure to the healthcare environment. This is an important factor in interpreting the relationship between learning evaluation and job readiness.

2. Univariate Analysis

Table 2. Distribution of Research Variables

Variables	Mean	SD	Interpretation
Learning Evaluation	3,76	0,61	Good
Formative Evaluation	3,82	0,59	Good
Summative Evaluation	3,70	0,64	Good
Preceptor Feedback	3,68	0,73	Moderate-Good
Clinical Simulation	3,79	0,66	Good
Work Readiness	3,71	0,65	Quite High

In general, all components of the learning evaluation were in the good category, with the highest score in the formative evaluation (3.82). This indicates that the educational institution has implemented a continuous assessment system. However, preceptor feedback had the lowest score (3.68), indicating that the quality of direct clinical guidance was not optimal and varied across practice settings. Meanwhile, graduates' job readiness was in the fairly high category, but not yet at the optimal level (≥4.0), indicating a gap in readiness for transition to the workforce.

3. Bivariate Analysis (Relationship Between Variables)

Table 3. Relationship between Learning Evaluation and Job Readiness

Independent Variables	Correlation (r)	p-value	Relationship Strength
Total Learning Evaluation	0,658	<0,001	Strong
Formative Evaluation	0,601	<0,001	Strong
Summative Evaluation	0,472	<0,001	Moderate
Preceptor Feedback	0,713	<0,001	Very Strong
Clinical Simulation	0,625	<0,001	Strong

The correlation test results showed that all components of the learning

evaluation had a significant relationship with graduates' work readiness ($p < 0.001$). The variable with the strongest relationship was preceptor feedback ($r = 0.713$), indicating that direct guidance in the clinical setting contributed most to shaping work readiness. Conversely, the summative evaluation had the weakest relationship ($r = 0.472$), indicating that the theory-based exam did not adequately represent actual work readiness in the field. This finding indicates that practice-based evaluation is more relevant than written exam-based evaluation in shaping graduates' work competencies.

4. Multivariate Analysis (Multiple Linear Regression)

Table 4. Multiple Linear Regression Results

Variables	B	SE	Beta	t	p-value
Formative Evaluation	0,196	0,071	0,184	2,76	0,006
Summative Evaluation	0,102	0,068	0,091	1,50	0,135
Preceptor Feedback	0,374	0,067	0,356	5,58	<0,001
Clinical Simulation	0,289	0,064	0,267	4,52	<0,001
Constant	0,811	0,219	-	3,70	<0,001

Model Summary: $R = 0,754$, $R^2 = 0,569$, Adjusted $R^2 = 0,561$, and $F = 96,21$ ($p < 0,001$)

The regression model shows that 56.9% of the variation in nursing graduates' work readiness can be explained by learning evaluation ($R^2 = 0.569$). This indicates a strong model, both statistically and substantively.

1. Most Dominant Variables
   - Preceptor Feedback ($\beta = 0.356$) → the most dominant factor
   - Clinical Simulation ($\beta = 0.267$)
   - Formative Evaluation ($\beta = 0.184$)
   - Summative Evaluation → not significant ($p = 0.135$)
2. Scientific Interpretation
   - Preceptor Feedback is the most influential variable because it reflects real-time clinical judgment, which cannot be replaced by written evaluation.
   - Clinical Simulation acts as a bridge between theory and practice, enhancing students' situational readiness.
   - Formative Evaluation strengthens the continuous learning loop.
3. Key Findings. Summative evaluation had no significant effect, indicating that:
   - The final exam does not adequately represent clinical work competencies
   - The workplace demands more practical competencies than theoretical ones

Learning evaluation has a significant effect on the work readiness of nursing graduates. Preceptor feedback is the most dominant factor in shaping work readiness. Summative evaluation does not have a significant effect on work readiness. The research model explains 56.9% of the variation in graduate work readiness. and Practice-based evaluation is more effective than theory-based evaluation.

Discussion

1. The Effect of Learning Evaluation on Nursing Graduates' Job Readiness

The results show that learning evaluation has a significant influence on nursing graduates' job readiness, with a model contribution of $R^2 = 0.569$, meaning that more than half of the variation in job readiness can be explained by the quality of learning evaluation. This finding confirms that learning evaluation is not only an academic measurement tool, but also a transformational instrument in shaping graduates' professional competencies.

This finding aligns with the literature stating that nurses' job readiness is a multidimensional construct influenced by clinical education experiences, evaluation methods, and transition support to the workforce (Rogers et al., 2021; Zhang et al., 2023). Competency-based evaluation has been shown to strengthen adaptability,

clinical skills, and decision-making in new nurses.

2. The Dominance of Preceptor Feedback in Shaping Work Readiness

Regression analysis results indicate that preceptor feedback is the most dominant variable in improving nursing graduates' job readiness (highest β and $p < 0.001$). These findings confirm that direct interaction with clinical preceptors has the greatest impact on developing real-world work skills. Preceptorship provides real-time feedback, contextual learning, and the transfer of tacit knowledge that cannot be achieved through classroom instruction.

Integrative studies indicate that preceptorship is a key strategy in effective transition-to-practice programs because it enhances graduates' work and social competencies (Rogers et al., 2021). Furthermore, several recent studies have confirmed that intensive clinical support is directly related to increased confidence and clinical decision-making in new nurses (Lee et al., 2024; Kim et al., 2024). Theoretically, this can be explained through experiential learning theory, where reflective experiences from real-world practice accelerate the internalization of professional competencies.

3. The Role of Clinical Simulation in Bridging the Theory-Practice Gap

Clinical simulation has been shown to be the second significant factor influencing graduates' work readiness. Simulation allows students to encounter complex clinical situations without risk to patients, thereby enhancing critical thinking and clinical response skills. These findings are consistent with the literature indicating that simulation-based learning improves transition readiness by increasing clinical competence and confidence in nursing students (Brown et al., 2020; Kim et al., 2024). Simulation also serves as a "safe environment" for building skills before entering the real world of work. Furthermore, recent studies have shown that the combination of simulation and real-life clinical experiences results in significant improvements in practice readiness and a reduction in transition shock (Chen et al., 2022; Zhang et al., 2023).

4. Formative Evaluation as a Strengthener of Continuous Learning

Formative evaluation in this study was shown to have a significant impact on work readiness, although its contribution was smaller than that of preceptor feedback and clinical simulation. Formative evaluation serves as an ongoing feedback mechanism that allows students to gradually improve their performance. This is crucial in developing continuous learning behaviors, which are crucial in the dynamic world of nursing. Literature supports that formative evaluation improves students' self-efficacy and reflective abilities, which ultimately impacts their job readiness (Johnson et al., 2021; Williams et al., 2019).

5. The Ineffectiveness of Summative Evaluation in Predicting Job Readiness

The results of the study showed that summative evaluation had no significant effect on the work readiness of nursing graduates ($p > 0.05$). This finding indicates a gap between exam-based academic assessment and the competency demands of the workplace.

Summative evaluation generally only measures cognitive aspects, while the workplace demands holistic competencies such as clinical skills, communication, and rapid decision-making. This aligns with the findings of Rogers et al. (2021), who stated that many nursing education programs still fail to integrate all domains of work readiness, particularly the social and organizational aspects. As a result, graduates often experience transition shock when entering the workforce.

6. Learning Evaluation as a System for Shaping Work Readiness

Overall, the results of this study indicate that learning evaluation plays a strategic role in shaping the work readiness of nursing graduates through three main mechanisms: 1) Strengthening clinical competencies through preceptor feedback, 2) Simulation as a bridge between theory and practice, 3) Formative evaluation as a continuous learning process

This supports the concept of work readiness, which encompasses four main domains: work competencies, personal characteristics, social intelligence, and organizational acumen (Caballero & Walker in Rogers et al., 2023). However, the findings also indicate that the formal (summative) evaluation aspect is not yet capable of reflecting all dimensions of work readiness, necessitating a redesign of the competency-based evaluation system. The results of this study have several important implications:

- Educational institutions need to strengthen the preceptorship system in clinical practice.
- Learning evaluation should be oriented towards competency, not just exam results.
- Clinical simulation should be integrated as a mandatory component of the curriculum.
- The evaluation system must encompass cognitive, psychomotor, and affective aspects in a balanced manner.

Literature shows that structured transition programs based on competency evaluation can improve work readiness, reduce transition stress, and increase nursing retention (Rogers et al., 2023; Kim et al., 2024). This study used a cross-sectional design, making it impossible to establish absolute causal relationships. Furthermore, self-report data potentially contains respondent perception bias.

Learning evaluation has been shown to have a significant impact on the work readiness of nursing graduates. The most dominant factor is preceptor feedback, followed by clinical simulation and formative evaluation. Summative evaluation, however, did not have a significant effect, indicating the need to transform the evaluation system toward a competency-based approach and real-life clinical experiences.

Conclusion

Learning evaluation has a significant and meaningful influence on the work readiness of nursing graduates. The research model shows that 56.9% of the variation in graduate work readiness can be explained by the quality of learning evaluation, confirming that learning evaluation is not simply an academic assessment mechanism, but a strategic component in developing the professional competency of nursing graduates.

Among all components of learning evaluation, preceptor feedback is the most dominant factor influencing graduate work readiness. This indicates that direct interaction in clinical practice accompanied by real-time feedback plays a crucial role in shaping clinical decision-making skills, adapting to the work environment, and increasing nursing students' self-confidence.

Furthermore, clinical simulations have also been shown to contribute significantly to improving work readiness, as they bridge the gap between theory and practice through scenario-based learning that approximates real-world conditions. Meanwhile, formative evaluation makes a positive contribution to supporting continuous learning, albeit with a smaller impact.

Conversely, summative evaluation does not show a significant influence on graduate work readiness, indicating that the final exam-based assessment system is not yet capable of representing the clinical competencies required in the workplace.

These findings highlight the gap between traditional academic evaluation systems and the competency demands of modern nursing professionals.

Overall, the results of this study confirm that nursing graduates' job readiness is more influenced by practice-based evaluation and direct clinical experience than by purely theory-based evaluation. This reinforces the importance of transforming the learning evaluation system toward a competency-based, collaborative, and practice-oriented approach.

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