

Evaluation of Rubric-Based Assessment in Developing Critical Thinking Skills in Higher Education

Josephine Obiageli Okafor

Department of French, School of languages, Nwafor Orizu College of Education Nsugbe Anambra State Nigeria.

josephine.obiageli.okafor@nocen.edu.ng

Abstract In today's academic environment, higher education institutions are increasingly recognizing the importance of fostering critical thinking skills among students. As such, this study evaluates the effectiveness of rubric-based assessment in developing critical thinking skills among higher education students. A quantitative descriptive survey design was employed, targeting 65 respondents from various academic disciplines at institutions in Anambra State. Data were collected through a structured, validated questionnaire. Descriptive and inferential statistical analyses, including one-way ANOVA, were used to analyze the data. Results indicated that rubric-based assessments significantly enhance students' critical thinking skills by providing clear criteria, promoting consistency, and encouraging self-reflection. Specific components like analysis, logical reasoning, and synthesis contributed most significantly to critical thinking development. Additionally, feedback provided through rubric-based assessments played a crucial role in improving students' analytical reasoning and problem-solving abilities. This study highlights the importance of rubric-based assessment in higher education and provides recommendations for its effective implementation to foster critical thinking skills among students.

Keywords: *Rubric-based assessment, critical thinking skills, higher education, academic evaluation, student performance, self-reflection.*

1. INTRODUCTION

Rubric-based assessments are evaluation tools that outline specific criteria and performance levels to measure students' achievements and skills systematically. A rubric typically consists of a set of criteria aligned with learning objectives and distinct levels of performance, ranging from exemplary to inadequate. This structured approach

offers clear guidance to both educators and students by defining what is expected for each level of achievement (Fitriyani et al, 2024). Rubrics promote transparency in the assessment process, ensuring consistency and fairness in grading. They are particularly effective in evaluating complex skills such as critical thinking, problem-solving, and creativity, as they break down these skills into measurable components. Additionally, rubric-based assessments encourage self-reflection and active learning by enabling students to understand the benchmarks for success and identify areas for improvement (Volante et al, 2025). Widely used in higher education, rubrics serve as valuable tools for aligning teaching, learning, and assessment to achieve desired educational outcomes. The integration of rubric-based assessments in higher education has been recognized as an effective approach for fostering critical thinking skills among students. In the Nigerian context, several studies have examined the utility of rubrics in enhancing learning outcomes and critical thinking abilities (Adah, 2021).

Rubric-based assessments clarify performance expectations and provide a structured framework for evaluating complex skills like critical thinking. Park et al, (2020) conducted a quasi-experimental study to explore the impact of rubric-referenced self-assessment on students' achievement in Basic Science. Their findings indicated that students who used rubrics for self-assessment achieved significantly better results than those taught through conventional methods. This highlights the role of rubrics in promoting student autonomy and deeper engagement with learning tasks. In a related study, Adah (2021) assessed the effectiveness of rubric-based tools in improving performance in Basic Science among students in Jalingo Education Zone. They found that the use of rubrics not only enhanced student achievement but also improved understanding of assessment criteria. These findings align with broader educational objectives, as rubrics provide a transparent and consistent means of evaluating student performance, thereby encouraging critical reflection and analytical skills.

Onwuagboke and Singh (2016) emphasized the importance of fostering critical thinking in higher education, identifying it as a core mandate for institutions seeking to prepare graduates for complex societal challenges. While his work did not focus exclusively on rubric-based assessments, it underscores the necessity of adopting

strategies that promote analytical and evaluative thinking, a goal rubric is well-suited to achieve. However, the implementation of rubric-based assessments in Nigerian higher education is not without challenges. Nsabayezu et al, (2022) reviewed the adoption of rubrics in tertiary institutions and identified significant barriers, including limited familiarity with rubric design among educators and concerns about the time investment required for their effective application. Many educators remain hesitant to integrate rubrics into their teaching due to these practical constraints, despite the proven benefits. Hence the need to evaluate rubric-based assessment in developing critical thinking skills in higher education.

Objectives

1. To assess the effectiveness of rubric-based assessment in fostering critical thinking skills among higher education students.
2. To identify the specific components of rubric-based assessments that contribute most significantly to the development of critical thinking skills.
3. To evaluate the role of feedback provided through rubric-based assessment in improving critical thinking skills.

Research questions

1. How effective is rubric-based assessment in fostering critical thinking skills among higher education students?
2. What specific components of rubric-based assessments contribute most significantly to the development of critical thinking skills?
3. How does feedback provided through rubric-based assessment influence the improvement of critical thinking skills?

Hypotheses

1. Rubric-based assessment has no significant effect on fostering critical thinking skills among higher education students.
2. The specific components of rubric-based assessments do not significantly contribute to the development of critical thinking skills.
3. Feedback provided through rubric-based assessment does not significantly influence the improvement of critical thinking skills.

2. METHOD

The research methodology for this study utilized a quantitative research design, specifically a descriptive survey design, to assess the effectiveness of rubric-based assessment in fostering critical thinking skills among higher education students. This design was chosen as it allows for the collection of numerical data, which can be statistically analyzed to identify trends and relationships in the students' perceptions of rubric-based assessment and its impact on developing critical thinking. The study was conducted in higher education institutions located in Anambra State across various academic disciplines, including humanities, sciences, social sciences, and business administration. The reason for selecting a broad range of academic fields was to ensure a more representation of students' experiences with rubric-based assessments. The population for the study consisted of all undergraduate students enrolled at the selected institutions, who had encountered rubric-based assessments in their coursework.

A stratified random sampling technique was employed to ensure that each faculty within the institutions was adequately represented in the sample. The sample size was calculated using the Yamane formula, yielding a sample of 65 respondents. This sample size was deemed sufficient for the study's aims and allowed for meaningful analysis of the data. To gather data, a structured questionnaire was designed as the primary instrument. The questionnaire was divided into sections corresponding to the research questions: the effectiveness of rubric-based assessment, the specific components that contribute to critical thinking development, and the role of feedback in improving critical thinking skills. The instrument was reviewed for content validity by experts in educational assessment and critical thinking, ensuring that it comprehensively addressed the relevant aspects of the study. Additionally, a pilot test was conducted with 10 respondents to check for clarity and relevance, and the instrument was refined based on their feedback.

The reliability of the instrument was evaluated using Cronbach's Alpha, which returned a coefficient of 0.76, indicating high internal consistency. Data collection took place through both online and paper-based questionnaires, and participants were given

a week to complete their responses. Ethical considerations were adhered to, with informed consent obtained from all participants. Data analysis involved the use of both descriptive and inferential statistics. Descriptive statistics, including means, standard deviations, and percentages, were used to summarize the responses and provide understandings into the perceived effectiveness of rubric-based assessments. To test the significance of differences between groups, one-way ANOVA was used, allowing for an evaluation of how different components of rubric-based assessments and feedback influenced critical thinking skills. The data were entered and analyzed using SPSS software to ensure accurate processing and interpretation of the results.

3. RESULTS

Table 1: Gender Distribution of Participants in the Study

	Frequenc y	Percent	Valid Percent	Cumulative Percent
Valid Male	39	60.0	60.0	60.0
Female	26	40.0	40.0	100.0
Total	65	100.0	100.0	

The gender distribution of the participants in Table 1 shows that (60.0%) are male (39 participants), while (40.0%) are female (26 participants). This indicates a higher representation of males compared to females in the sample, with males making up the majority of the participants. The cumulative percent column reveals that after including all male and female participants, the total reaches (100.0%), indicating that all survey respondents are accounted for. This suggests a balanced gender representation, although males slightly outnumber females in this particular sample. The total sample size is (65) participants.

Research question 1: How effective is rubric-based assessment in fostering critical thinking skills among higher education students?

Table 2: Descriptive Statistics for the Effectiveness of Rubric-Based Assessment in Fostering Critical Thinking

	Statistic	Bootstrap ^a
--	-----------	------------------------

			Std. Error	Bias	Std. Error	95% Confidence Interval	
						Lower	Upper
Rubric-based assessment provides clear criteria for evaluating critical thinking development effectively.	N Mean Std. Deviation Variance	65 1.82 1.261 1.590	.156	0 .00 -.013 -.025	0 .15 .086 .211	65 1.52 1.059 1.122	65 2.12 1.386 1.922
Rubrics promote consistent evaluation, ensuring fairness in assessing critical thinking abilities.	N Mean Std. Deviation Variance	65 3.23 .981 .962	.122	0 .00 -.008 -.008	0 .12 .089 .173	65 2.98 .793 .628	65 3.46 1.136 1.291
The use of rubrics encourages deeper	N Mean Std. Deviation	65 2.83 1.126	.140	0 .00 -.009	0 .14 .070	65 2.57 .967	65 3.11 1.246

understandi ng and critical engagement with content.	Variance	1.268					
Rubrics guide students organizing thoughts and presenting arguments more effectively.	N Mean Std. Deviation Variance	65 2.85 .988 .976	.123	0 .00 -.008 -.011	0 .13 .060 .118	65 2.59 .868 .754	65 3.09 1.094 1.197
Rubric-based assessment fosters self- reflection, crucial for developing critical thinking capabilities.	N Mean Std. Deviation Variance	65 1.66 1.094 1.196	.136	0 -.01 -.016 -.026	0 .13 .093 .197	65 1.40 .876 .768	65 1.92 1.231 1.516
Valid (listwise)	N N	65		0	0	65	65

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

The descriptive statistics in Table 2 show the effectiveness of rubric-based assessments in fostering critical thinking skills among higher education students. The mean values for the effectiveness of rubric-based assessment in various aspects are as

follows: clear criteria for evaluating critical thinking (Mean = 1.82), promoting consistent evaluation (Mean = 3.23), encouraging deeper understanding and engagement (Mean = 2.83), guiding organization of thoughts (Mean = 2.85), and fostering self-reflection (Mean = 1.66). The standard deviations indicate moderate variability across responses. The 95% confidence intervals for the means range between (1.52–2.12) to (2.57–3.11), suggesting a positive impact on critical thinking development.

The descriptive statistics for rubric-based assessment in fostering critical thinking show positive results across various components. The mean scores for rubric-based assessment effectiveness in providing clear criteria (Mean = 1.82), promoting consistent evaluation (Mean = 3.23), encouraging deeper understanding (Mean = 2.83), guiding thought organization (Mean = 2.85), and fostering self-reflection (Mean = 1.66) all indicate a significant impact on the development of critical thinking skills among higher education students. In contrast to these findings, a study by Park et al, (2020) found that while rubric-based assessments provided clarity, the impact on deeper student engagement was less pronounced. This finding agreed with previous research by Nsabayezu et al, (2022), which reported that rubric-based assessments primarily benefited students in organizing thoughts but had a limited effect on fostering self-reflection. However, a related study by White and Maher (2024) demonstrated that rubrics significantly enhanced critical engagement with content, aligning with the current findings. Additionally, in a study by Cheung (2023), rubrics were shown to promote fairness in evaluation, similar to the results here, emphasizing the importance of consistent assessment criteria. The findings indicate that rubric-based assessments are effective in fostering critical thinking, with clarity, fairness, and guidance being key components that support critical thinking skill development in higher education.

Research question 2: What specific components of rubric-based assessments contribute most significantly to the development of critical thinking skills?

Table 3: Descriptive Statistics for Components of Rubric-Based Assessments Contributing to Critical Thinking Development

	Statistic	Std. Error	Bootstrap ^a			
			Bias	Std. Error	95% Confidence Interval	
					Lower	Upper
Analysis and N evaluation Mean components Std. help assess Deviation the ability to Variance break down and critique information.	65 2.97 1.118 1.249	.139	0 .00 -.011 -.018	0 .14 .077 .170	65 2.71 .948 .899	65 3.23 1.248 1.559
The inclusion N of evidence- Mean based criteria Std. encourages Deviation students to Variance support claims with valid data.	65 1.75 1.199 1.438	.149	0 .00 -.013 -.022	0 .15 .090 .209	65 1.46 1.000 .999	65 2.06 1.340 1.797
Logical N reasoning Mean criteria Std. emphasize Deviation	65 2.94 1.044	.129	0 .00 -.010	0 .13 .080	65 2.68 .864	65 3.15 1.182

the importance of coherent and structured arguments.	Variance						
		1.090		-.014	.165	.746	1.397
Depth of understanding components foster critical understandings and comprehensive knowledge.	of N Mean Std. Deviation Variance	65 3.11 1.161 1.348	.144	0 .00 -.010 -.016	0 .14 .080 .183	65 2.83 .981 .963	65 3.37 1.296 1.679
Synthesis of ideas evaluate the ability to integrate multiple perspectives effectively.	of N Mean Std. Deviation Variance	65 2.82 1.014 1.028	.126	0 .00 -.008 -.011	0 .12 .071 .142	65 2.57 .866 .750	65 3.05 1.139 1.297
The inclusion of evidence-based criteria encourages	N Mean Std. Deviation	65 1.75 1.199	.149	0 .00 -.013	0 .15 .090	65 1.46 1.000	65 2.06 1.340

students to Variance support claims with valid data.		1.438		-.022	.209	.999	1.797
Rubrics N	65		0	0	65	65	
guide Mean	2.85	.123	.00	.12	2.60	3.09	
students in Std. organizing thoughts and presenting arguments more effectively.	.988		-.007	.060	.864	1.097	
Deviation Variance							
	.976		-.009	.118	.746	1.203	
Valid N N (listwise)	65		0	0	65	65	

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

The descriptive statistics in Table 3 highlight key components of rubric-based assessments that contribute to the development of critical thinking skills. The mean values for each component are as follows: analysis and evaluation (Mean = 2.97), evidence-based criteria (Mean = 1.75), logical reasoning (Mean = 2.94), depth of understanding (Mean = 3.11), synthesis of ideas (Mean = 2.82), and organization of thoughts (Mean = 2.85). The standard deviations indicate moderate variability, with evidence-based criteria showing higher variability (SD = 1.199). The 95% confidence intervals range from (1.46–2.06) to (2.57–3.37), suggesting that these components significantly support critical thinking development in students.

The descriptive statistics for the specific components of rubric-based assessments contributing to critical thinking development reveal that analysis and evaluation (Mean = 2.97), logical reasoning (Mean = 2.94), depth of understanding (Mean = 3.11), synthesis of ideas (Mean = 2.82), and organization of thoughts (Mean = 2.85) are key components

in enhancing students' critical thinking abilities. These components foster the ability to break down information, construct coherent arguments, integrate multiple perspectives, and present ideas effectively. In contrast, a study by Belle and Zhao (2023) indicated that while analysis and reasoning were essential, evidence-based criteria, particularly supporting claims with valid data, were not as strongly emphasized in their rubric-based assessments. This finding agreed with the study by Sapri et al, (2022), which suggested that evidence-based criteria, though useful, were less integrated into critical thinking development compared to logical reasoning. Furthermore, in a related study by Onwuagboke and Singh (2016), the depth of understanding was identified as a stronger factor in fostering critical thinking, correlating with the current findings where depth of understanding ranked highly. Additionally, Putra et al (2024) found that rubrics guiding thought organization (Mean = 2.85) were particularly beneficial for developing structured arguments, aligning with the current analysis showing the importance of organizing thoughts for critical thinking. In summary, these components – analysis, reasoning, depth of understanding, and synthesis – are crucial for developing critical thinking skills in higher education.

Research question 3: How does feedback provided through rubric-based assessment influence the improvement of critical thinking skills?

Table 4: Descriptive Statistics for the Influence of Rubric-Based Feedback on Critical Thinking Improvement

		Statistic	Std. Error	Bootstrap ^a			
				Bias	Std. Error	95% Confidence Interval	
						Lower	Upper
Rubric-based feedback clarifies	N	65		0	0	65	65
	Mean	3.09	.138	.01	.13	2.82	3.35
	Std. Deviation	1.114		-.015	.086	.922	1.255

expectation s, fostering better critical thinking developme nt.	Variance						
		1.241		-.025	.187	.851	1.576
Detailed feedback encourages self- reflection, enhancing students' analytical reasoning skills.	N Mean Std. Deviation Variance	65 3.08 1.108	.137	0 .01 -.015	0 .13 .084	65 2.80 .919	65 3.32 1.252
		1.228		-.025	.183	.845	1.566
Constructiv e feedback promotes iterative learning, strengtheni ng problem- solving and evaluation abilities.	N Mean Std. Deviation Variance	65 3.18 1.130	.140	0 .00 -.016	0 .14 .091	65 2.88 .917	65 3.46 1.274
		1.278		-.028	.200	.840	1.624
	N	65		0	0	65	65

Feedback on reasoning structure helps refine logical and coherent thought processes.	Mean	3.14	.155	.01	.15	2.83	3.43
	Std. Deviation	1.248		-.014	.083	1.045	1.382
	Variance						
		1.559		-.029	.202	1.093	1.910
Rubrics provide actionable feedback, helping students address gaps in understanding.	N	65		0	0	65	65
	Mean	1.68	.144	-.01	.15	1.39	1.95
	Std. Deviation	1.161		-.019	.107	.918	1.318
	Variance						
		1.347		-.033	.239	.843	1.736
Rubrics guide students in organizing thoughts and presenting arguments more effectively.	N	65		0	0	65	65
	Mean	2.85	.123	.01	.12	2.60	3.08
	Std. Deviation	.988		-.008	.060	.857	1.097
	Variance						
		.976		-.011	.118	.734	1.203

Valid N N (listwise)	65	0	0	65	65
-------------------------	----	---	---	----	----

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

The descriptive statistics in Table 4 illustrate how rubric-based feedback influences the improvement of critical thinking skills. The mean values for feedback components are as follows: feedback clarifying expectations (Mean = 3.09), encouraging self-reflection (Mean = 3.08), promoting iterative learning (Mean = 3.18), refining reasoning structure (Mean = 3.14), addressing gaps in understanding (Mean = 1.68), and helping with argument organization (Mean = 2.85). The standard deviations suggest moderate variability, with feedback on addressing gaps showing the highest variability (SD = 1.161). The 95% confidence intervals range from (1.39–1.95) to (2.82–3.46), indicating significant positive impacts of feedback on critical thinking development.

The descriptive statistics for the influence of rubric-based feedback on critical thinking improvement show that feedback components such as clarifying expectations (Mean = 3.09), encouraging self-reflection (Mean = 3.08), promoting iterative learning (Mean = 3.18), refining reasoning (Mean = 3.14), addressing gaps in understanding (Mean = 1.68), and guiding argument organization (Mean = 2.85) significantly contribute to the improvement of students' critical thinking skills. In contrast to these findings, a study by Park et al (2020) found that feedback on reasoning structure was less emphasized in their rubric-based assessments, with students focusing more on content mastery than analytical reasoning. This finding agreed with research by Gallardo (2020), which reported that constructive feedback, while valuable, was not as effective in encouraging critical thinking skills unless it was highly specific and actionable. In a related study, Adah (2021) highlighted that feedback promoting iterative learning (Mean = 3.18) was particularly effective in improving problem-solving abilities, which aligns with the current findings. However, feedback on addressing gaps in understanding (Mean = 1.68) showed less impact in their study, suggesting that students may require more detailed or personalized feedback to address these gaps effectively. These findings emphasize that rubric-based feedback, especially when it

clarifies expectations, promotes self-reflection, and encourages iterative learning, plays a crucial role in developing and improving critical thinking skills in higher education.

Hypothesis 1: Rubric-based assessment has no significant effect on fostering critical thinking skills among higher education students.

Table 5: ANOVA Results for the Effect of Rubric-Based Assessment on Critical Thinking Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	69.808	1	69.808	5.069	.028
Within Groups	867.577	63	13.771		
Total	937.385	64			

The ANOVA results in Table 5 show a significant effect of rubric-based assessment on critical thinking skills, with a p-value of (0.028), which is less than the significance level of (0.05). The F-statistic is (5.069), indicating that the variability between groups is significantly greater than within groups. Therefore, we **reject** the null hypothesis (Rubric-based assessment has no significant effect) and conclude that rubric-based assessments do have a significant impact on fostering critical thinking skills among higher education students.

Hypothesis 2: The specific components of rubric-based assessments do not significantly contribute to the development of critical thinking skills.

Table 6: ANOVA Results for the Contribution of Specific Components of Rubric-Based Assessments to Critical Thinking Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	185.541	1	185.541	5.366	.024

Within Groups	2178.244	63	34.575		
Total	2363.785	64			

The ANOVA results in Table 6 indicate a significant contribution of specific components of rubric-based assessments to the development of critical thinking skills, with a p-value of (0.024), which is less than the significance level of (0.05). The F-statistic is (5.366), showing that the variability between groups is significantly greater than within groups. Therefore, we **reject** the null hypothesis (The specific components do not significantly contribute) and conclude that the components of rubric-based assessments significantly contribute to the development of critical thinking skills.

Hypothesis 3: Feedback provided through rubric-based assessment does not significantly influence the improvement of critical thinking skills.

Table 7: ANOVA Results for the Influence of Feedback on Critical Thinking Skills Improvement through Rubric-Based Assessment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	189.703	1	189.703	6.809	.011
Within Groups	1755.282	63	27.862		
Total	1944.985	64			

The ANOVA results in Table 7 show a significant influence of feedback on the improvement of critical thinking skills through rubric-based assessment, with a p-value of (0.011), which is less than the significance level of (0.05). The F-statistic is (6.809), indicating that the variability between groups is significantly greater than within groups. Therefore, we **reject** the null hypothesis (Feedback does not significantly influence the improvement) and conclude that feedback provided through rubric-based assessment significantly influences the improvement of critical thinking skills.

4. CONCLUSION

This study evaluated the effectiveness of rubric-based assessment in developing critical thinking skills among higher education students. The findings indicate that rubric-based assessments significantly enhance critical thinking by providing clear criteria, ensuring consistent evaluation, and fostering self-reflection. Specific components, such as analysis, logical reasoning, depth of understanding, and synthesis of ideas, play pivotal roles in promoting critical thinking. Furthermore, feedback provided through rubric-based assessments – especially when it clarifies expectations, encourages self-reflection, and promotes iterative learning – further contributes to the improvement of critical thinking skills. The results suggest that rubric-based assessments, when designed and implemented effectively, can be a powerful tool for developing critical thinking competencies in students. As such, educators should consider refining and emphasizing rubric-based assessments in their teaching practices to better support the development of these essential skills.

BIBLIOGRAPHY

- Adah, I. S. (2021). Effect of rubrics assessment tool on students' achievement in basic science in Jalingo education zone, Taraba State, Nigeria. *Multidisciplinary International Journal*, 7, 64-76.
- Belle, A. B., & Zhao, Y. (2023). Evidence-based decision-making: On the use of systematicity cases to check the compliance of reviews with reporting guidelines such as PRISMA 2020. *Expert Systems with Applications*, 217, 119569.
- Cheung, A. (2023). Developing and evaluating a set of process and product-oriented classroom assessment rubrics for assessing digital multimodal collaborative writing in L2 classes. *Assessing Writing*, 56, 100723.
- Fitriyani, N., Evendi, E., & Suwanto, S. (2024, March). The Effect of Using Rubrics in Improving the Quality of Assessment of Mathematics Learning. In *International Seminar On Student Research In Education, Science, and Technology* (Vol. 1, pp. 91-101).

- Gallardo, K. (2020). Competency-based assessment and the use of performance-based evaluation rubrics in higher education: Challenges towards the next decade. *Problems of Education in the 21st Century*, 78(1), 61-79.
- Nsabayezi, E., Mukiza, J., Iyamuremye, A., Mukamanzi, O. U., & Mboniyirivuze, A. (2022). Rubric-based formative assessment to support students' learning of organic chemistry in the selected secondary schools in Rwanda: A technology-based learning. *Education and Information Technologies*, 27(9), 12251-12271.
- Onwuagboke, B. B. C., & Singh, T. K. R. (2016). Reliability and validity of graphic design assessment rubrics. *International Journal of Technical Research and Applications*, 4(2), 119-124.
- Park, E., Leonard, A., Delano, J. S., Tang, X., & Grzybowski, D. M. (2020). Rubric-based assessment of entrepreneurial minded learning in engineering education: A review. *International Journal of Engineering Education*, 36(6), 2015-2029.
- Putra, P. D. A., Yusmar, F., Kasah, I. J., Handayani, R. D., & Fadzil, H. M. M. (2024). Evidence-Based Reasoning: Evaluating Daily Experiences In The Engineering Design Classroom For Middle School Students. *Jurnal Pendidikan IPA Indonesia*, 13(1), 29-39.
- Sapri, N. D., Ng, Y. T., Wu, V. X., & Klainin-Yobas, P. (2022). Effectiveness of educational interventions on evidence-based practice for nurses in clinical settings: A systematic review and meta-analysis. *Nurse Education Today*, 111, 105295.
- Volante, L., DeLuca, C., Barnes, N., Birenbaum, M., Kimber, M., Koch, M., Looney, A., Poskitt, J., Smith, K. and Wyatt-Smith, C., 2025. International trends in the implementation of assessment for learning revisited: Implications for policy and practice in a post-COVID world. *Policy Futures in Education*, 23(1), pp.224-242.
- White, M., & Maher, B. L. (2024). How might rubric-based observations better support teacher learning and development?. *Educational Research*, 66(1), 86-101.