

JIRSEA Issue: Vol. 22 No. 1

JIRSEA/UPM Special Issue

April 2024

ISSN 1675-6061

<http://www.seairweb.info/journal/index.aspx>

Submission Timeline

Received: 30/10/2023

Revised as per Preliminary

Review: 15/01/2024

Final Revision & Acceptance:

15/03/2024

Role And Influence Of Rubric-Referenced Assessment In Postgraduate Education: A Case Study From A Malaysian Public University

Liang Jing Teh, Su Luan Wong, Mas Nida Md. Khambari,
Rahmita Wirza O.K Rahmat, Sai Hong Tang

CITE ARTICLE: Teh, L.J., Wong, S.L., Khambari, M.N.M., Rahmat, R.W.O.K & Tang, S.H. (2024). Role And Influence Of Rubric-Referenced Assessment In Postgraduate Education: A Case Study From A Malaysian Public University, *Journal of Institutional Research South East Asia*, 22(1), 179-199



Publisher: SEAIR Secretariat

C/O Suan Dusit Rajaphat University
295 Nakhon Ratchasima Rd, Dusit, Dusit
District, Bangkok 10300, THAILAND
email:seair.info@gmail.com

<http://www.seairweb.info/>

DECLARATION: Articles published in JIRSEA adhere to the declaration clauses that: (1) the article is entirely the researcher(s) original work and responsibility, (2) principles of honesty and integrity throughout the research process, and unless otherwise indicated and properly cited, this declaration encompasses all aspects of the article, including but not limited to text, figures, tables, data, and any accompanying material are observed, (3) there is no conflict of interest with JIRSEA in any form, (4) holding to all required JIRSEA policies of publication ethics and practices conforming to the COPE Principles of Transparency and Best Practice in Scholarly Publishing, (5) copyrights assignment to JIRSEA, whereby it is published online in an open access requirement of Creative Commons 4.0, and (6) is not funded by any party unless otherwise disclosed.

CREATIVE COMMONS ATTRIBUTION



4.0 INTERNATIONAL LICENSE

ROLE AND INFLUENCE OF RUBRIC-REFERENCED ASSESSMENT IN POSTGRADUATE EDUCATION: A CASE STUDY FROM A MALAYSIAN PUBLIC UNIVERSITY

Liang Jing Teh¹, Su Luan Wong^{*2}, Mas Nida Md. Khambari³,
Rahmita Wirza O.K Rahmat⁴ and Sai Hong Tang⁵

^{1,2,3}*Faculty of Educational Studies, Universiti Putra Malaysia, Malaysia*

⁴*Faculty of Computer Science and Information Technology, UPM, Malaysia*

⁵*Faculty of Engineering, Universiti Putra Malaysia, Malaysia*

*Corresponding email: suluan@upm.edu.my

ABSTRACT

Rubric-referenced assessments have been postulated to have both benefits and drawbacks on student learning outcomes. The ambiguity regarding the influence of rubrics on Malaysian postgraduate students' learning experience persists. Thus, in this study, a case study qualitative approach was adopted to explore postgraduate students' perception towards the role and influence of assessment rubrics in their learning experience. Criterion purposeful sampling was employed to select five postgraduate students and the Activity Theory was adopted as the theoretical foundation of the study. Data were collected via focus group discussion and were analysed using content analysis. The findings revealed that the explicit criteria in rubrics provided postgraduate students with clarity on the instructor's expectations, enabling them to set specific academic goals and approach their tasks purposefully. This eventually reduced their anxiety and increased their motivation and confidence in completing the assignments. Nevertheless, one student expressed that the preset criteria could limit learner's creativity and voice. The study also found that students perceived rubrics to have a positive influence on their learning strategies and knowledge gained. The students used rubrics as a tool to facilitate academic goal setting and self-assess their learning progress. Consequently, their knowledge retention and academic achievement improved. The findings imply that rubric-reference assessments should be contemplated by tertiary-level educational stakeholders. However, a well-designed rubric needs to be followed by sound implementation. Ongoing communication is key both between the instructors and between instructors and students to develop a shared understanding of the rubric.

Keywords: assessment rubric, learning experience, postgraduate students, focus group discussion

1. Introduction

The landscape of education in the 21st century is characterised by a shift from teacher-centric pedagogical approaches to those prioritising student-centred learning. This worldwide phenomenon has found fertile ground in Malaysian universities, where assessment practices were transitioning from the conventional assessment which primarily focuses on regurgitating knowledge, to alternative assessment that encourages the development of 21st-century skills among the students (Ministry of Higher Education Malaysia, 2021). While not without merit, traditional assessments presented several limitations. This teacher-centred approach relegated learners to passive receivers of information, prioritising rote memorisation over critical thinking and understanding (Dikli, 2003). Traditional assessments also rarely provided students with opportunities for developing 21st-century skills such as problem-solving, creativity, and collaboration (Dikli, 2003). Moreover, conventional often employ a one-size-fits-all approach, which may not cater to diverse learning styles and individual strengths, it may also provide limited feedback beyond a numerical or letter grade, making it challenging for students to understand specific areas for improvement (Dikli, 2003).

One of the emphases in the Malaysia Education Blueprint 2013–2025 is that “...assessment must be aligned with international benchmarks to ensure that Malaysian students are acquiring the knowledge and skills necessary for their success in the 21st century and beyond...” (Ministry of Education Malaysia, 2013, p. 4-1). The significance of alternative assessment became more evident during the COVID-19 pandemic whereby instruction was mandated to be conducted online and learning became more self-directed. Educators had to come up with new and more holistic ways of assessing students’ learning. Rubric-referenced assessment (RRA) is one of the alternative assessments that have attracted widespread attention among scholars and practitioners, considering the upsurge in the number of relevant studies in the past decade (Brookhart, 2018).

Since the dawn of the transformation from traditional assessment to alternative assessment more than three decades ago (Anderson 1998), the effectiveness of rubrics as a tool in assessments has been studied broadly in various educational fields and age groups (Andrade, 2005; Andrade *et al.*, 2008; Panadero & Jonsson, 2013; Dawson, 2017; Pérez-Guillén *et al.*, 2022). Over the years, various definitions of rubric have been constructed by different practitioners and researchers but according to Brookhart (2013), “a rubric is a coherent set of criteria for students’ work that includes descriptions of levels of performance quality on the criteria” (p. 4). Rubrics can be segregated into two categories which are analytic and holistic rubrics. The analytic rubric presents multiple assessment criteria in separate rows with its respective descriptors for each rating across columns, whereas the holistic rubric comprises rating scales along the rows and the description of overall performance

object, mediating tool) in the context of this study, the design of the rubrics and the objectives of the academic assessment are closely interconnected, changes in either one of these components would change the design of another. The design of the rubrics and the academic assessments would also shape the ways students utilise the rubrics and approach the academic assignments. The intertwined relationship between the students, rubrics, and the academic task would produce a unique learning experience (outcome). In this study, the researchers are interested in exploring the role and influence of rubrics as a mediating tool in this activity system.

The various ways rubrics mediate the activity of assessing students' learning were found in numerous previous studies. Rubrics served as a mediating tool in RRA by clarifying the success criteria (Andrade et al., 2008). The explicit description of the rating for each criterion provides students with a clear understanding of the instructor's expected outcomes (Laurian & Fitzgerald, 2013). This clarity allows learners to be more focused and purposeful when approaching academic assessments (Pérez-Guillén et al., 2022). Also, academic assessments were mediated by rubrics in terms of enhancing students' self-efficacy. Given the clarity on the assessment's success criteria, rubrics could increase confidence while lowering anxiety levels among the students, enabling them to engage in assignments with more assurance and competence (Panadero & Jonsson, 2013).

Other than the clarity of the instructor's expectations and increased self-efficacy, rubrics also mediate the RRA process by promoting self-regulated learning. Students engage in project planning and self-assessment to solve their academic tasks when they are clear on the expectations of the evaluator (Bukhari et al., 2021; Fraile et al., 2017). This could foster responsibility and autonomy in their academic journey (Jonsson, 2014). Moreover, rubrics also mediate the learning process by helping students identify key information (Andrade et al., 2008; Holmstedt et al., 2018). Rubrics guide students in focusing on important concepts by delineating the essential criteria of an assessment, thereby enhancing the depth and quality of their learning (Saeed et al., 2019).

The improvement in the feedback process and grading consistency is also one of the ways rubrics served as a mediating tool in RRA. Students are more willing and adept at both receiving and giving feedback about their academic performance through the use of rubrics (Chowdhury, 2019). The consistency in grading across multiple instructors also can be fostered by incorporating assessment rubrics, ensuring fairness and equity in assessment outcomes (Andrade & Du, 2005). Ultimately, the aforementioned mediations of rubrics enable RRA to be a student-centered assessment (Fraile et al., 2017; Oakleaf, 2009). This empowers students to take an active role in their learning progress and eventually enhance their academic performance (Greenberg, 2015; Lipnevich et al., 2014).

On the contrary, several previous studies have also revealed that rubrics can serve as a mediating tool which negatively influences student learning. One of the mediating roles of rubrics is causing a knowledge gap in understanding the success criteria among learners. Even with rubrics readily available, many students struggle to grasp the description of each rating (Matshedisho, 2020). This misalignment between the expectations of instructors and students' interpretation of assessment rubrics could create significant gaps in understanding the true essence of components that are being evaluated, which could then affect students' academic performance. Despite offering clear expectations, rubrics could mediate the learning process by inadvertently increasing stress and hindering self-regulated learning among the students. The detailed criteria provided in the rubrics may induce pressure and the fear of not being able to attain each criterion among learners, affecting their motivation and enjoyment of the learning process (Panadero & Romero, 2014).

Although descriptions of criteria are provided in rubrics, various interpretations may arise when rubrics are utilized by multiple instructors (Sadler, 2014). This causes rubrics to mediate the learning experience in terms of inconsistent grading. This mediating effect is especially prominent in subjective works such as essays and artwork, potentially leading to a lack of anchorage and inconsistencies in scoring (Sitorus, 2020). Furthermore, students' overreliance on the preset criteria of rubrics could also be one of the mediating roles of rubrics. Learners might prioritize fulfilling those criteria rather than forming their unique understanding (Sadler, 2014). Consequently, this dependence towards rubrics could lead to the risk of superficial learning. Learners might resort to superficial strategies solely to tick the boxes and achieve good grades, compromising the depth of their learning experiences (Bearman & Ajjawi, 2018; Torrance, 2012).

Numerous empirical studies have scrutinized the role and influence of RRA among university students' learning experiences, yet the discourse regarding the merits and drawbacks of RRA persists. Essentially, rubrics can be a double-edged sword in mediating the process of learning as the aforementioned studies have shown that rubrics could both enhance and hinder student learning experience. The effectiveness of RRA hinges heavily on both its design and implementation (Bukhari et al., 2021; Panadero & Jonsson, 2020). A poorly designed or inconsistently executed rubric could negate its benefits. Effective use of RRA requires instructors to carefully tailor rubrics to specific learning objectives, provide clear explanations, and allow open discussions around the purpose and limitations of RRA.

Given the aforementioned mixed conclusions regarding the potential role and influence of RRA among postgraduate students' learning experience, there is a dire need to explore deeper into how postgraduate students in Malaysia perceive assessment rubrics as a mediating tool, and how their learning experience is shaped by the integration of RRA in their learning process. Per se, the following are the

research questions of this study that emerged from the previous studies and theoretical framework:

- 1) How do postgraduate students perceive the role of rubrics in facilitating or hindering their learning experience?
- 2) In what ways does the implementation of rubric-referenced assessment influence postgraduate students' learning strategies and perceived knowledge gained?

2. Methodology

2.1. Participants

The population of this study was the postgraduate students enrolled at the Faculty of Educational Studies, Universiti Putra Malaysia (FESUPM). The samples were selected using a criterion purposeful random sampling technique. The inclusion criteria are postgraduate students who have completed a course offered in FESUPM which incorporated RRAs. This method allows the researchers to select information-rich cases that enable the researcher to gain substantial insights into issues of pertinence to the purpose of the central inquiry (Patton, 2015). Among the eligible cases, five postgraduate students were randomly selected as the samples of this study. Even when working with small sample sizes, the random sampling technique could enhance the credibility of the findings (Patton, 2015). The demographics of the participants are presented in Table 1. All their career background were related to the field of education and training. They were working in the public sector of the respective industry. Their range of working experience was between nine to 20 years. One of the participants is from the army training field, another teaches media production in an institution, and the rest were working at public secondary schools. The participants' names and any names mentioned by the participants throughout the FGD have been modified for confidentiality purposes.

Table 1: Demographics of Participants

| Respondent | Gender | Age | Career background | Years of experience |
|-------------------|---------------|------------|---------------------------|----------------------------|
| Ahmad | Male | 40 | Teacher | 11 |
| Fatimah | Female | 34 | Teacher | 9 |
| Lee | Male | 36 | Teacher | 11 |
| Ali | Male | 41 | Army Officer | 19 |
| Hassan | Male | 42 | University Media Producer | 20 |

2.2. Instrumentation

A case study approach of qualitative design was utilised to answer the two research questions on postgraduate students' perception towards RRA and how RRA influenced their learning strategies and perceived knowledge gained. The objective of a qualitative study is to elicit participants' personal experiences, perceived meanings, and understanding of the particular phenomenon. In this study, a focus group discussion (FGD) was conducted because it creates a safer space for participants to share their thoughts and feelings when compared to a one-on-one interview, which allows the researchers to obtain in-depth experience and insights among the participants (Krueger, 2014).

An FGD protocol was developed as the research instrument based on previous literature and the theoretical framework, which was then improved via consulting experts in the field of social science research. Semi-structured questions were utilized in collecting the data. A few guiding questions were prepared pre-FGD, and open-ended questions were prompted spontaneously throughout the FGD. This is so that accurate information regarding RRA can be acquired and at the same time, viewpoints from the participants are not limited to the researcher's presumption (Kallio et al., 2016). As the primary aim of this study is to explore postgraduate students' learning experience regarding the integration of RRA, the sub-themes employed in guiding the FGD process of this research are conceptualised as follows:

- **Facilitation of learning:** Postgraduate students' perceptions on the ways RRA aided their learning process.
- **Hindrance in learning:** Postgraduate students' perceptions on how their learning process was negatively impacted by RRA.
- **Perceived influence on learning:** Postgraduate students' feelings about how RRA influenced their learning strategies and perceived knowledge gained.

Consequently, different semi-structured questions were developed to guide the FGD process to gain the participants' insights:

- What do you like about using rubrics in assessing your assignment? Why?
- What do you dislike about using rubrics in assessing your assignment? Why?
- How do you feel when you are doing assignments with rubrics? Why?
- How do you feel when you are doing assignments without rubrics? Why?
- How do rubric-referenced assessments change your learning strategies?
- Do you think using rubrics helped you in gaining knowledge? How so?

Creswell and Creswell (2018) mentioned that the limitations of conducting FGD include (1) participants may not express their opinion equally, and (2) biased

responses may be induced by the researcher's presence. To ensure all participants articulate their perspectives equally, the first author checked with all participants for any other comments before moving to the next question. And to limit biased responses from the participants, the researcher emphasized that "...there is no right or wrong answer..." at the start of the FGD and reminded the participants throughout the FGD when needed. The FGD took about one hour and 15 minutes. Before beginning the FGD, consent for audio recording was obtained from all participants, and they were given a printed copy of the rubric for their last assignment to refresh their memory on the rubric used. Analytical rubrics were used among the participants of this study.

2.3. Data Analysis

Based on Erlingsson and Brysiewicz (2017), the goal of qualitative content analysis is to "systematically transform a large amount of text into a highly organized and concise summary of key results" (p.94). The content analysis approach was utilized in this study to analyse the data obtained. The following presents the general steps of content analysis adapted from Erlingsson and Brysiewicz (2017), Forman and Damschroder (2007), and Mayring (2014):

1. **Gain overall impression:** Before initiating content analysis, the researchers read and reread the transcripts, forming an overall impression of the conversations during the FGD while keeping the research questions in focus. Intuitive insights and initial impressions of key ideas shared by the participants were documented.
2. **Divide into meaning units:** Following familiarisation, the researchers break down the text into segments capturing meaningful units of information while staying aware of the research objectives and questions.
3. **Condense meaning units:** Each meaning unit was condensed into shorter versions of the same sentence, preserving the core meaning. The researchers ensured that the meaning units were appropriately sized (avoid too much content or multiple meanings) to minimise the loss of meaning during condensation.
4. **Label with codes:** Each condensed meaning unit was assigned a label (code) that succinctly characterises it. During this process, a close connection to the data was maintained by the researchers and interpretation was minimised.
5. **Forming categories:** Codes were compared, and recurring or related codes were grouped to create categories which aligned with the research questions, facilitating the organisation of content for deeper analysis.
6. **Development of themes:** Similar to category formation, overarching themes were identified to bind multiple categories together, enhancing the understanding of underlying patterns in the content.
7. **Iterative approach:** Content analysis is not a linear, but an iterative process. The

researchers kept notes on the overall understanding of the transcript, then revisited and reconsidered these notes from various perspectives as needed throughout the analysis. Throughout the analysis, steps 1 to 6 above were also repeated and revised as necessary, enabling a more comprehensive and nuanced examination.

As the responses given comprised English and Malay language, the discussion was first transcribed in both languages. To ensure the accuracy of language translation, the Malay transcript was first translated to English and back-translated to Malay and then reviewed by comparing it to the original Malay transcript. All translations and reviews were done by three experienced language experts. Further, both the first and second authors of this study autonomously interpreted and analysed the transcripts to bolster the trustworthiness of the results. Subsequently, the analysed data sets were compared to identify similarities or differences. A considerable number of agreements were observed between both authors' interpretations, and any disparities were deliberated upon to arrive at valid conclusions. This process is crucial for assessing the study's credibility.

3. Findings

3.1. Research question 1: How do postgraduate students perceive the role of rubrics in facilitating or hindering their learning experience?

This section presents findings following the research questions. The first research question is "How do postgraduate students perceive the role of rubrics in facilitating or hindering their learning experience?". The following illustrates the themes regarding the role of rubrics in facilitating student learning.

3.1.1. Rubric clarifies instructor's expectations for students

A common theme that threads most of the participants' sharing is about their fondness for rubrics is the increased clarity about the instructor's expectations, "*If I want to get exemplary, then I will read that category in detail. So [I] will be reading and knowing what it is that [the lecturer] actually want.*" says Lee. With the descriptions of criteria, the students felt that the "*rubric is like a guide when I want to do my assignment, it guides my flow, like what should I start with my writing.*" (Ahmad). Hassan resonated with Ahmad's comment, saying "*Actually this rubric is like an indicator for me, a guide for us to do our assignment*".

Ahmad continued to share that the point weightage for each criterion "*shows emphasis on which part needs more of our attention and focus*". "*I agree*" says Fatimah "*We can know the main points to be included based on the converted points allocated*". This clarity also enabled students to be more capable of identifying pertinent information while the lecturer was teaching during formal classes, as shared

by Lee: *“During lectures or when I’m looking at slides, we tend to be more able to focus more and catch the more important information”*.

3.1.2. Rubric reduces feelings of anxiety among students

Another theme which emerged from the content analysis in this study is related to the reduction of psychological distress among students due to the presence of rubrics. Fatimah raised concerns about doing assignments without rubrics: *“Because like [there are] a few assignments that have no rubrics...”* and other participants actively chipped in their experience. *“We would be confused...”* (Hassan). *“I feel uncertain and will have a lot of doubts... When I discuss it with my friends in our class, we find that our understanding of the question is different. So it becomes like, am I doing this correctly?”* (Ahmad). *“Yes”* Fatimah agrees with the participants’ comments.

The participants contrasted their aforementioned negative emotions with the positive affective domains they experienced when rubrics were utilized in their assessments. Fatimah mentioned, *“I feel happy with this rubric, because I like to have something that I can follow, I just follow what [the lecturer] wants”*. Ahmad shared the same sentiment by adding *“For me, I feel calmer in doing the assignment because we have our own guide. According to the rubrics, we can know how we manage the assignment”*. Similarly, Hassan also experienced less anxiety and shared that *“I feel more organized in terms of I will hold other parts first, and finish the introduction then only go to the next part. If without the rubrics, it will go like haywire you know, like all over the place”*.

Ali further elaborated on Hassan’s comment by saying *“Rubrics can take away our feeling of worry in doing assignments. If [there are] no rubrics, before we hand in the assignment, we will always want to change the answer and think [about] what points that haven't been included. With rubrics, we follow the description with the highest mark, then ahh, it is completed now. It washes away the chaos in our mind haha”*.

3.1.3. Rubric enhances students’ self-efficacy

Through the FGD, the researchers also found that RRA leads to higher motivation in completing academic tasks among the students. Almost all the participants shared the opinion that they would *“focus more on the assignments with rubrics rather than the ones without the rubrics and complete them first”*. *“For me, rubric is something that gives me motivation”* says Hassan. Apart from motivation, Ali also mentioned that the use of rubrics heightened their confidence in learning, saying *“When we submit the assignment based on the rubric, we gain confidence, that what we did there is correct, and you gained some knowledge from the assignment that you have done”*.

3.1.4. Rubric limits self-expression

Regarding the mediating role of rubrics in hindering student's learning, a theme emerged in the transcript of this study and it is associated with limited self-expression and heightened emotional distress among the students. One respondent clearly expressed his frustration by saying *"With the rubrics, I couldn't express my own opinion. I am like limited by the rubrics"* (Ali). This limitation of the rubric could then conjure anxiety among the students, Ali added *"If I do something different from the rubrics, I would be worried that my marks will be affected because this is what the lecturer wants and all the marks are stated there. So whether I want to or not, I will have to follow the rubrics"*.

When prompted to elaborate further, he mentioned that the limitation in self-expression is mainly caused by the converted points of the rubric as it could limit the number of main points written by the student: *"So for example in this rubrics, for this category, the converted points is 20, maybe 5 main points is already enough, right, because we are given the portion of the converted points. As compared to assignments without rubrics, I would just write as many points as I can because, for me, more main points mean more marks. It's why I say it limits, not to say in a bad way. But ya, because the guide is there, you cannot express freely"* (Ali).

3.2. Research question 2: In what ways does the implementation of rubric-referenced assessment change postgraduate students' learning strategies and perceived knowledge gained?

The second research question was "In what ways does the implementation of rubric-referenced assessment change postgraduate students' learning strategies and perceived knowledge gained?" This section delves into the learning strategies aspect of the research question.

3.2.1. The influence of rubrics on students' learning strategies

Setting personalised goals based on the rubric is one of the emerging themes about the change in learning strategies. Almost all participants mentioned that they would *"glance through [descriptions of criteria], then focus on what you want to achieve"* (Lee), allowing them to set their desired goal for each criterion and read its description in detail. They would also adjust their goals according to their perceived feasibility *"I will try to go for as high as possible but if I feel like I cannot, then I go to the previous rating category"* says Lee. While most of the participants focus on the performance descriptor of the highest rating category, Ahmad mentioned that he read descriptions for both the highest and the lowest score by saying *"I only refer to these two columns, [the highest and lowest]"*. This is so that he knows what is needed to succeed while being aware of the bare minimum criteria: *"because the highest is the most important. Then the lowest column is for me to check what is the minimum that is needed"* (Ahmad).

Another theme which emerged is regarding the use of rubrics among students as a guide and self-assessment tool in completing their assignments. Apart from setting their goals, the students also used the rubric as a guide in breaking down the assignment into parts that they could work on according to the criteria. *“I would refer [rubric] first, then find the main points, then after done elaborating for the first part then only I go to the next part”* says Ahmad. Fatimah also employed a similar strategy and self-assess her work based on the rubric as she progressed through the assignment: *“I aim [for the desired rating category] first, then do [the first part of the essay], then look back [at the rubric], until I finish that particular part [of the essay]”*.

Astoundingly, Hassan shared that he transferred his knowledge of utilising rubrics into other assignments that were not accompanied by rubrics: *“There was an assignment that does not have rubrics. So what I did was, after I learnt how to use rubrics, automatically, I would use the rubrics given by Prof. and implement them in assignments that do not have rubrics. So it’s also like a guide for the subject that does not have a rubric. Because we have used the rubrics, we can know sort of the direction of the assignment that does not have rubrics also.”* (Hassan)

Moreover, rubric enables students to make informed decisions in engaging an assessment is also one of the themes that emerged. With the clarity provided by the rubrics, they were also able to determine the essay questions that they were more confident in answering, as shared by Lee *“There was one question that many of us almost did. But after we looked through the rubrics, we felt that this [question] was a bit too tedious for us. So then most of us abandoned the questions because we felt like we couldn’t answer.”* Hassan added *“...the question seems easy”*, *“Ya, looks easy”* agreed Ali. In other words, rubrics are able to aid students in decision-making when they are given multiple options in an assessment, as explained by Lee: *“With rubrics, it also helps us to decide which questions to go for, because rubric stated all the criteria there, so you are clearer”*.

3.2.2. The influence of rubrics on students’ perceived knowledge gained

With regards to the change in perceived knowledge gained, increased clarity on the knowledge gained as well as improved academic performance are the themes that emerged from the content analysis. One respondent pointed out that rubrics enabled students to clearly know the knowledge that they have gained via completing the assignment: *“It’s a written rubric right, so when we do the assignment, we are clear that we know something, and we learnt something”* (Ali). When the participants were asked about the difference in their academic results before and after rubrics were implemented in their assessments, Fatimah claimed to have *“Big [positive] changes”*. After further probing, the researcher found that their experience and understanding of using rubrics play a significant role in improving their grade,

“During the first semester, actually, we are given rubrics too, but at that time we were still inexperienced about rubrics” (Hassan).

Fatimah added: *“Like we do not know how to use yet”*. Hassan continued sharing about how he utilised rubrics to identify the areas for improvement and motivate himself to enhance his academic performance: *“Ya. Like for me, during the first semester, my result for the first assignment was the lowest, but I referred to the rubrics and I know what are the things that I had missed. So it gives me motivation to improve myself for the second assignment. For the second assignment, I refer to the rubrics more, making sure it’s correct. Then when we got the result, it improved. So it’s like a satisfaction for us when we compared to the first assignment”*.

4. Discussion

This research intended to explore postgraduate students’ perception towards the role and influence of RRA within their learning experience. Through the perspective of AT, the researchers aimed to explore how rubrics as the mediating tool facilitated or hindered the interactions between the subject (postgraduate students) and the object (academic assignments) within an activity system of integrating RRA in learning, which leads to the student learning experience. The findings of this study revealed that clarifying instructor’s expectations is the biggest mediating effect of rubrics in facilitating student learning. This resonates with the findings by Andrade *et al.* (2008), Fraile *et al.* (2017), Laurian and Fitzgerald (2013), Oakleaf (2009), and Pérez-Guillén *et al.* (2022), all of which concluded that one of the key advantages of rubrics is the explicit description of success criteria.

This finding signifies that even in the context of adult learners such as postgraduate students, providing them with clear academic success criteria is pertinent to creating a more positive learning experience. This is because when students have this clarity in mind, they are more motivated to learn and complete academic tasks. They could also set personalised goals at the beginning of the task and break the assignment down into smaller parts to be solved. Similar findings were also found by Pérez-Guillén *et al.* (2022) who concluded that learners approach their task more purposefully when they are clear about the success criteria. Hence, rubrics can serve as an effective mediating tool in circumstances with learners who lack motivation to learn and complete academic tasks. This also suggests that rubrics can be particularly meaningful for students when dealing with complex projects.

Based on the information in the rubric such as description of criteria, rating scales, and converted points, students can choose the question which fits them best and self-assess their progress in completing the assignment. Bukhari *et al.* (2021) and Fraile *et al.* (2017) found that this could foster self-regulated learning among the students.

Indeed, findings in this study have shown that students can not only self-evaluate their assessments in this study, but also the assignments beyond the scope of this study which did not have rubrics. This shows that the knowledge of utilising rubrics in guiding and improving student's work is transferrable, and it empowers students to take ownership of their learning path (Jonsson, 2014). However, this skill requires the understanding and experience of using rubrics effectively, indicating the important role of the instructor in scaffolding the ways of using the rubrics, as well as following up with the students regarding any concerns and challenges that they faced in using the rubric.

The aforementioned influences of rubrics as the mediating tool could also enhance students' learning experience both emotionally and academically. In accordance with Panadero and Jonsson (2013), students feel calmer while they are undergoing the assessment as well as more satisfied and confident with their work. Through shedding light on both the accomplishments and the areas for improvement among the students, rubrics can be an effective tool for educators to assist low-performing students, instill self-confidence within them, and inspire them to close the gap between their current attainment and their aspirations. This has been shown possible by Greenberg (2015), Holmstedt et al. (2018), Lipnevich et al. (2014) and Saeed *et al.* (2019), who found that rubrics could empower students to improve their academic grades by discerning the key information.

On the contrary, the descriptors and converted points given in the rubric may limit one from expressing freely and creatively. As students generally would want to pass their assessments with flying colours, they would be forced to abide by the rubric even though they do not fully agree with it. This is congruent with the critique by Bearman and Ajjawi (2018), and Torrance (2012) who stated that autonomous thinking should be developed among the tertiary students rather than complying with pre-set criteria. As stated by Andrade and Du (2005), the purpose of a rubric is to communicate that standard to the learners, which gives each student an equal chance to excel in that assessment. Therefore, during the implementation of RRA, it is important to remain adaptable, such as discussing the rubric's criteria between the instructor and students, followed by amendments to the rubric if needed (Panadero & Jonsson, 2020).

Another potential shortcoming of the rubric that is worth mentioning in this research is that during the FGD, phrases such as "I like to follow" or "I just follow" emerged among the participants. This suggests that rubrics may have the possibility of diminishing the development of an individual's soft skills such as critical thinking and self-leadership (Sadler, 2014; Sitorus, 2020). Additionally, the findings of this study postulate that merely giving RRA is inadequate, students need to understand effective ways to make use of the rubric as well (Panadero & Jonsson, 2020). According to the participants' sharing, they did not obtain their desired result during

the first semester despite having assessment rubrics. Their results improved after learning how to incorporate rubrics better via experience and trial-and-error, which means that students, especially novice users of rubrics possess the risks of not having higher performance and experiencing higher stress due to the unfamiliarity towards rubrics (Panadero & Romero, 2014).

In summary, findings from this study showed that rubrics can facilitate student learning and have a positive impact towards their learning strategies and perceived knowledge gained. The interconnected nature of the multifaceted benefits of RRA such as providing students with clarity and guidance, fuelling students' confidence and motivation, together with improving their academic performance, could ultimately cultivate independent learners. Nevertheless, the preset criteria in rubrics can backfire as they could potentially hinder learners from meaningful learning. Individualism and student voice can be diminished due to the preset criteria, implying that the developers of rubrics must strike a balance between describing the success criteria explicitly and tailoring the rubrics to be inclusive of different students.

5. Implications

Findings from this study have shown that almost all postgraduate students perceived RRA as a significant tool in facilitating learning, and all of them perceived RRA to have a positive effect on their learning strategies and knowledge gained. Given the positive experience and impact on postgraduate students' learning experience, educational stakeholders such as policymakers, practitioners, and leaders in higher institutions should contemplate integrating RRA in the curriculum, syllabus, or assessments in higher education. Educators also should consider incorporating rubric-referenced assessments in the teaching and learning process. However, a sound rubric is not a panacea, effective implementation of RRA is vital in maximising students' learning experience.

Since this study revealed that students' understanding of using rubrics plays a significant role, communication between the lecturer and students is essential to close the gap of understanding. Students should be given time to digest the information in the rubric, educators ought to be open to students' feedback and enquiries. The practitioners also need to expect an adapting period from the students before rubrics come into effect on students' learning experience. Perhaps, briefing or training sessions regarding the best practices in utilizing rubrics can be given to the students so that they can avoid pitfalls in using rubrics, and the adaptation period can be shortened. To actualize that, the educators must be equipped with sufficient knowledge. Thus, educational stakeholders such as policymakers and higher institution leaders should allocate a budget and initiate training on the professional development among instructors regarding the design and implementation of

assessment rubrics.

Several theoretical implications are present while viewing the findings of this study through the lens of AT. The results revealed a complex interplay between rubrics as a mediating tool, postgraduate students as the subject, academic tasks as the object and students' learning experiences as the outcome. As posited by AT, while rubrics were introduced as mediating artefacts to support learning, they also invoked external constraints on student outcomes. This tension reflects the inherent contradictions that can exist within an activity system, as well as the fact that a mediating tool may facilitate or hinder the relationship between the subject and the object. AT also focus on the social and cultural aspects of teaching and learning, this implies that the limitations of RRA can be addressed through social interaction and collaboration, such as open communication among the students and instructors as well as within faculty members who are incorporating RRA. This could develop a shared understanding of rubrics within the learning community, which could enhance student learning outcomes. Collectively, these implications aim to support educational stakeholders and practitioners in integrating RRA effectively.

6. Limitations of the Study

While this exploratory study has concluded several key findings on RRA that practitioners and scholars can take note of, there are a few limitations. The research findings were based on the perception and subjective experience of individuals, and the data were self-reported by a small group of postgraduate students. Thus, it is vital to recognize that these findings cannot be generalized to the population of students with a background that differs from this study. As researchers served as the primary instrument in qualitative research data collection, it is acknowledged that the findings in this study are prone to the researchers' bias and idiosyncrasies.

7. Recommendation for Future Studies

Considering the qualitative insights gained from this study on postgraduate students' experiences with RRA, several recommendations for future research emerged, which could enrich the understanding of this complex educational phenomenon. Firstly, the scope of the study can be expanded by investigating the impact of rubrics across different disciplines and subject areas. Rather than traditional essay-based subjects, the effectiveness of rubrics can also be explored in areas like science, mathematics, arts, and vocational skills. Furthermore, rubrics can be digitalised or integrated with technologies such as artificial intelligence and learning analytics. Examining the impact of these digital rubrics on students' experiences and learning outcomes would be insightful during the current digital era. Future research could also be extended to include other types of rubrics such as the holistic rubrics, as well as student groups with diverse learning styles, cultural backgrounds, and academic abilities. A comparative analysis between the mentioned different subject areas, student groups,

and rubric types could provide valuable insights into the strengths and weaknesses of each rubric and the effectiveness of RRA in different learning scenarios, guiding practitioners in selecting the most suitable approach for their specific instructional contexts. Moreover, longitudinal studies which track the evolving impact of RRA over an extended period or multi-method research design that combines qualitative and quantitative approaches could illuminate a more comprehensive understanding of the effects of RRA on student learning outcomes.

8. Conclusion

In this study, four postgraduate students perceived that RRA played a role in facilitating their learning whereas one of them perceived that RRA may hinder student learning. They appreciated the clarity of the instructor's expectations provided by the rubrics. All the participants felt calmer, more at ease and less anxious in completing their work because of the guidance provided by the rubric except one who felt limited by the rubric in terms of self-expression. This means that while rubrics can bring advantages to many students, a few of them may experience the opposite due to the gap in understanding regarding the rubric's criteria. Thus, sole having a well-designed rubric is insufficient. During the implementation of RRA, it is crucial to have regular communication between the students and instructors to close the gap of knowledge among the students or to adjust the rubrics as necessary.

As for the influence of RRA towards learning, all five of the postgraduate students perceived RRA to have a notable positive influence on their learning strategies and knowledge gained. Based on the description of the criteria, they were able to set specific academic goals, determine the steps needed to reach those goals, and self-assess their progress regularly throughout the process of doing their assignment. They even transferred this knowledge of self-evaluation using rubrics to better other courses' projects which did not come with a rubric. Students also felt more motivated and confident to do assignments with rubrics and have a higher sense of fulfilment when the task is accomplished. This eventually enhanced students' knowledge retention and academic performance. This shows that rubrics can be an effective tool to boost students' self-efficacy and academic performance, notably among students who are struggling academically as well as novice students such as first-year or first-semester students. In a nutshell, integrating RRA into instruction could take up more of the educators' and students' time and energy, but the positive responses found in this study have shown that the fruit of this extra effort is well worth it.

Acknowledgements

The authors would like to extend their gratitude to Universiti Putra Malaysia for the GIPP Grant (GP-IPS/2023/9744200) which made this article possible.

References

- Anandi, R. P., & Zailaini, M. A. (2019). Using Rasch Model to Assess Self-Assessment Speaking Skill Rubric for Non-Native Arabic Language Speakers. *Pertanika Journal of Social Sciences & Humanities*, 27(2).
- Anderson, R. S. (1998). Why talk about different ways to grade? The shift from traditional assessment to alternative assessment. *New Directions for Teaching and Learning*, 1998(74), 5–16.
- Andrade, H. G. (2005). Teaching with rubrics: The good, the bad, and the ugly. *College Teaching*, 53(1), 27–31.
- Andrade, H. L., & Du, Y. (2005). Student perspectives on rubric-referenced assessment. *Practical Assessment, Research and Evaluation*, 10(3), 12. <https://doi.org/10.7275/g367-ye94>
- Andrade, H. L., Du, Y., & Wang, X. (2008). Putting rubrics to the test: The effect of a model, criteria generation, and rubric-referenced self-assessment on elementary school students' writing. *Educational Measurement: Issues and Practice*, 27(2), 3-13. <https://doi.org/10.1111/j.1745-3992.2008.00118.x>
- Aziz, M.N.A. (2021, December 7). *Alternative assessments ease students' fear of exams*. NST Online. <https://www.nst.com.my/opinion/letters/2021/12/751937/alternative-assessments-ease-students-fear-exams>
- Bearman, M., & Ajjawi, R. (2021). Can a rubric do more than be transparent? Invitation as a new metaphor for assessment criteria. *Studies in Higher Education*, 46(2), 359-368. <https://doi.org/10.1080/03075079.2019.1637842>
- Brookhart, S. M. (2013). *How to create and use rubrics for formative assessment and grading*. ASCD.
- Brookhart, S. M. (2018). Appropriate criteria: Key to effective rubrics. *Frontiers in Education*, 3. <https://doi.org/10.3389/educ.2018.00022>
- Bukhari, N., Jamal, J., Ismail, A., & Shamsuddin, J. (2021). Assessment Rubric for Research Report Writing: A Tool for Supervision. *Malaysian Journal of Learning and Instruction*, 18(2), 1–43. <https://doi.org/10.32890/mjli2021.18.2.1>
- Chowdhury, F. (2019). Application of rubrics in the classroom: A vital tool for improvement in assessment, feedback and learning. *International education studies*, 12(1), 61-68. <https://doi.org/10.5539/ies.v12n1p61>
- Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE publications.

- Dawson, P. (2017). Assessment rubrics: Towards clearer and more replicable design, research and practice. *Assessment & Evaluation in Higher Education*, 42(3), 347–360. <https://doi.org/10.1080/02602938.2015.1111294>
- Dikli, S. (2003). Assessment at a distance: Traditional vs. alternative assessments. *Turkish Online Journal of Educational Technology-TOJET*, 2(3), 13-19.
- Engeström, Y. (1993). Developmental studies of work as a testbench of activity theory: The case of primary care medical practice. In S. Chaiklin & J. Lave (Eds.), *Understanding practice: Perspectives on activity and context* (pp. 64-103). Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511625510.004>
- Erlingsson, C., & Brysiewicz, P. (2017). A hands-on guide to doing content analysis. *African Journal of Emergency Medicine*, 7(3), 93–99. <https://doi.org/10.1016/j.afjem.2017.08.001>
- Forman, J., & Damschroder, L. (2007). Qualitative content analysis. In *Empirical methods for bioethics: A primer* (pp. 39-62). Emerald Group Publishing Limited. [https://doi.org/10.1016/S1479-3709\(07\)11003-7](https://doi.org/10.1016/S1479-3709(07)11003-7)
- Fraile, J., Panadero, E., & Pardo, R. (2017). Co-creating rubrics: The effects on self-regulated learning, self-efficacy and performance of establishing assessment criteria with students. *Studies in Educational Evaluation*, 53, 69-76. <https://doi.org/10.1016/j.stueduc.2017.03.003>
- Greenberg, K. P. (2015). Rubric use in formative assessment: A detailed behavioral rubric helps students improve their scientific writing skills. *Teaching of Psychology*, 42(3), 211-217. <https://psycnet.apa.org/doi/10.1177/00986283155587618>
- Holmstedt, P., Jönsson, A., & Aspelin, J. (2018). Learning to see new things: Using criteria to support pre-service teachers' discernment in the context of teachers' relational work. *Frontiers in Education*, 3, 54. <https://doi.org/10.3389/educ.2018.00054>
- Ibharim, L. F. M., Yatim, M. H. M., & Zain, N. Z. M. (2019). Development of Rubric to Measure Children's 21 st Century Skills in Digital Game-Based Learning. *Universal Journal of Educational Research*, 7(10A), 7-12. <https://doi.org/10.13189/ujer.2019.071702>
- Jonsson, A. (2014). Rubrics as a way of providing transparency in assessment. *Assessment & Evaluation in Higher Education*, 39(7), 840-852. <https://doi.org/10.1080/02602938.2013.875117>

Jusoh, A. J., Rashid, N. A., & Handrianto, C. (2022). Developing a rubric for teachers self-efficacy and teaching competency in drug education based on the ADDIE model. *International Journal of Education, Information Technology, and Others*, 5(5), 139-149. <https://doi.org/10.5281/zenodo.7460146>

Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *Journal of advanced nursing*, 72(12), 2954-2965. <https://doi.org/10.1111/jan.13031>

Krueger, R. A. (2014). *Focus groups: A practical guide for applied research*. SAGE publications.

Laurian, S., & Fitzgerald, C. J. (2013). Effects of using rubrics in a university academic level Romanian literature class. *Procedia-Social and Behavioral Sciences*, 76, 431-440. <https://doi.org/10.1016/j.sbspro.2013.04.141>

Lipnevich, A. A., McCallen, L. N., Miles, K. P., & Smith, J. K. (2014). Mind the gap! Students' use of exemplars and detailed rubrics as formative assessment. *Instructional Science*, 42(4), 539-559. <https://doi.org/10.1007/s11251-013-9299-9>

Matshedisho, K. R. (2020). Straddling rows and columns: Students' (mis)conceptions of an assessment rubric. *Assessment & Evaluation in Higher Education*, 45(2), 169–179. <https://doi.org/10.1080/02602938.2019.1616671>

Mayring, P. (2014). *Qualitative content analysis: Theoretical foundation, basic procedures and software solution*. Klagenfurt, Austria.

Ministry of Education Malaysia. (2013). *Malaysia education blueprint 2013 -2025 (Preschool to Post-Secondary Education)*. Kementerian Pendidikan Malaysia.

Ministry of Higher Education Malaysia. (2021). *Alternative assessment in higher education: A practical guide to assessing learning*. Department of Higher Education Malaysia, Ministry of Higher Education Malaysia.

Musid, N. A., Affandi, H. M., Hussain, S. H., Kamal, M. F. M., & Abas, N. H. (2019). The development of on job training assessment constructs and elements for construction technology students in Malaysian vocational college. *Journal of Technical Education and Training*, 11(1).

Oakleaf, M. (2009). Using rubrics to assess information literacy: An examination of methodology and interrater reliability. *Journal of the American Society for Information Science and Technology*, 60(5), 969-983. <https://doi.org/10.1002/asi.21030>

- Panadero, E., & Jonsson, A. (2013). The use of scoring rubrics for formative assessment purposes revisited: A review. *Educational Research Review*, 9, 129–144. <https://doi.org/10.1016/j.edurev.2013.01.002>
- Panadero, E., & Jonsson, A. (2020). A critical review of the arguments against the use of rubrics. *Educational Research Review*, 30, 100329. <https://doi.org/10.1016/j.edurev.2020.100329>
- Panadero, E., & Romero, M. (2014). To rubric or not to rubric? The effects of self-assessment on self-regulation, performance and self-efficacy. *Assessment in Education: Principles, Policy & Practice*, 21(2), 133-148. <https://doi.org/10.1080/0969594X.2013.877872>
- Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice*. Sage publications.
- Pérez-Guillén, S., Carrasco-Uribarren, A., Celis, C. L., González-Rueda, V., Rodríguez-Rubio, P. R., & Cabanillas-Barea, S. (2022). Students' perceptions, engagement and satisfaction with the use of an e-rubric for the assessment of manual skills in physiotherapy. *BMC Medical Education*, 22(1), 623. <https://doi.org/10.1186/s12909-022-03651-w>
- Popham, W. J. (1997). What's wrong--and what's right--with rubrics. *Educational leadership*, 55(2), 72-75.
- Sadler, D. R. (2014). The futility of attempting to codify academic achievement standards. *Higher Education*, 67(3), 273-288. <https://doi.org/10.1007/s10734-013-9649-1>
- Saeed, K. M., Ismail, S. A. M. M., & Eng, L. S. (2019). Malaysian speaking proficiency assessment effectiveness for undergraduates suffering from minimal descriptors. *International Journal of Instruction*, 12(1), 1059–1076. <https://doi.org/10.29333/iji.2019.12168a>
- Sitorus, M. L. (2020). Non-Native English Teachers Interpretation of Rubrics Used for Assessing Students' Writing. In *Proceedings of the International Conference on Future of Education* (Vol. 3, No. 2, pp. 16-25). <https://doi.org/10.17501/26307413.2020.3202>
- Torrance, H. (2012). Formative assessment at the crossroads: Conformative, deformative and transformative assessment. *Oxford Review of Education*, 38(3), 323-342. <https://doi.org/10.1080/03054985.2012.689693>
- Ung, L. L., Labadin, J., & Nizam, S. (2021). Development of a rubric to assess computational thinking skills among primary school students in Malaysia. *ESTEEM Academic Journal*, 17, 11-22.
- Vygotsky, L. S. (1978). *Mind and society: The development of higher mental processes*. Harvard University Press.