

PERCEPTIONS OF STUDENTS TOWARDS THE INFLUENCE OF PEER ASSESSMENT ON THEIR COMMUNICATION AND CRITICAL THINKING SKILLS

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Abstract: The study aimed to investigate students' perception towards the use of peer assessment to improve their employability skills, especially communication and critical thinking skills. To achieve this objective, a survey was conducted with the participation of 226 students at a university in Hanoi, Vietnam. They were taking the course named "Skills for University Success", in which it was required that students made presentations and gave feedback to other groups' performances. The analyzed data showed that students highly valued the benefits of giving and receiving peer assessment. In terms of communication skills, the majority of students agreed that through this activity, they could learn and improve their ability to convey the ideas, listen to others, and create a friendly atmosphere while giving comments. Regarding critical thinking skills, peer assessment helped students identify strengths and weaknesses of peers' performances more quickly and correctly. The study suggested that lecturers or curriculum organizers should consider making this activity compulsory in their courses so that students can boost their employability skills.

Keywords: employability skills, peer assessment, assessing peer, critical thinking, communication skills

1. Introduction

One of the critical issues in higher education is equipping students with sufficient knowledge and skills that match employers' requirements. However, there still exists a visible gap between skills which graduates possess and those needed at the workplace, or employability skills. Employability skills are defined by National Centre for Vocational Education Research (NCVER), Australia as those enabling "people to gain, keep and progress in employment" (Naidu et al., 2020, p. 16). Although each country has their own framework for employability skills, they still

share some common ones such as communication, teamwork, critical thinking, problem solving, organizational skills.

Via surveys, businesses affirm that they cannot gain success without a workforce possessing those skills. Such skills, with the outbreak of the Covid-19 pandemic, even become more important. Specifically, in research to assess the impact of Covid-19 on job and skills, OECD (2021) finds out that while technical competencies in the healthcare field are in higher demand, transversal skills like communication skills or teamwork are even more vital in top-tier job positions. Interpersonal, communication

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skills, and decision-making skills are also perceived as essential to very important among individual factors for the success in obtaining a job in Vietnam labor market in the report of V2work project (Climent, 2019).

Covid-19 pandemic has accelerated changes not only in the mode of learning but also in the working paradigm. Many businesses are considering working models to adopt among full-remote; "hybrid" or partially remote; or physical, also known as "going back to the office" (Saraiva et al., 2021). According to the Capgemini Research Institute (2020), the transition to a hybrid workforce model is foreseeable, in which skill profiles tend to change as humans interact with new technologies, or in other words, there is "a request for new skills and the updating of existing ones" (Schilirò, 2021). Schilirò also identified critical thinking as one of the most crucial skills for employees. At the same time, Cook (2020) added some protocol-related factors for the changes from face-to-face communication mode to digital mode when engaging in business conversations and information exchange.

Within the scope of this study, with limited resources and time, it was impossible for us to equip and develop employability skills for our students. Therefore, we chose to focus on two essential types, which is communication and critical thinking skills. They are not only shared skills in many frameworks created in different countries but also mentioned as the 21st century skills that are critically significant to success in today's world.

Peer assessment is considered as a form of assessment which 'requires students to provide either feedback or grades (or both) to their peers on a product or a performance, based on the criteria of excellence for that product or event which students may have been involved in

determining' (Boud & Falchikov, 2007, p. 132). This activity can be termed as peer grading, peer feedback, peer evaluation or peer review (Topping, 2021). In our study, peer assessment could be both peer feedback and peer grading when students were to give comments on their peers' performance and then complete a marking form.

The influence of peer assessment on four aspects of students' learning: (1) performance and achievement, (2) affective aspects, (3) students' awareness of the learning process and (4) employability skills was investigated in various studies. Most of them, however, tended to focus more on the first three aspects and effects on employability skills of students were just a "by-product". Specifically, in an attempt to improve students' performance, while many studies found that giving and receiving feedback did bring positive effects Barac et al., 2021; Chang et al., 2020; Chien et al., 2020; Li et al., 2021; T. N. Pham et al., 2020), some of them discovered that peer assessment could also develop students' critical thinking. Chien et al. (2020) asserted that by providing comments to peers and making self-reflections, apart from improving speaking skills, students were able to significantly enhance their critical thinking skills. Likewise, in another study, students learning with Virtual Reality design activities based on peer assessment approach demonstrated better critical thinking tendency than those without peer assessment (Chang et al., 2020). Within the Vietnamese context, Pham et al. (2020) aimed to improve their students' writing skills by using electronic peer feedback. Along with the desired outcome, they also discovered that this activity could foster students' critical reflective thinking.

Findings on the effectiveness of peer assessment on communication skills are even rarer. While comparing the benefits of giving and receiving peer feedback, Ion et al.

(2019) discovered that receiving feedback could better students' communication with their peers as well as their ability to argue. Likewise, students in another study affirmed that they became a better listener when doing peer review (Barac et al., 2021).

In short, to our best knowledge, the influence of peer assessment on employability skills in general and critical thinking as well as communication skills in particular have not been adequately researched. Therefore, while seeing the potential of peer assessment in developing these skills for students, we also hope to contribute to the current literature of this field. Our study aimed to answer the questions:

- (1) How do students perceive the influence of peer assessment on their communication skills?
- (2) How do students perceive the influence of peer assessment on their critical thinking?

To answer the above questions, we find it necessary to conduct our research through a course in which critical thinking and communication skills are the focus and peer assessment is included. *Skills for university success* is a course aiming at fostering the different study skill sets for students such as study planning skills, critical thinking skills or teamwork skills. It is delivered for students who are majored in languages and international studies at a university in Vietnam. Various learning activities are conducted during the course, especially weekly collaborative presentation and end-of-course project. More specifically, every week students work in groups of 4 to present on a given topic related to an aspect of study skills, which is intended to prepare them for the final group

projects in terms of choosing teammates, topics and working process. Learning from weekly presentations, students team up and create a video, a poster, or an oral presentation for the final project. After weekly presentation or demonstration of the final product, each group receives peer assessment from their classmates then followed by a debrief from the teacher. Both oral and written comments from peers are allowed via different platforms like Zoom and Google forms. Students can also give feedback anonymously to the groups. After the presentations, groups are asked to submit a report on their teamwork with guided questions.

2. Literature Review

2.1. Employability Skills

Though innovations have constantly been conducted at universities so that graduates can satisfy the labour market demands, employers are still seeking a set of skills other than just specialized knowledge in those prospective candidates. This means that good academic qualifications are not the guarantee for them to get a job position anymore (Yorke, 2006). They need to develop employability skills which allow them "to gain, keep and progress in employment" (Naidu et al., 2020, p. 16). Employability skills can be termed as transferable skills, soft skills, behavioral competencies skills or cross-curricular skills (Awofala et al., 2017).

Even though different regions and industries require different sets of skills, there are common ones that can be found in almost all places and jobs. Such skills are named by Moldovan (2020) as "transversal skills" or "transversal competencies", which are illustrated in the following figure.

Figure 1
Groups and Sub-Groups of Transversal Competencies

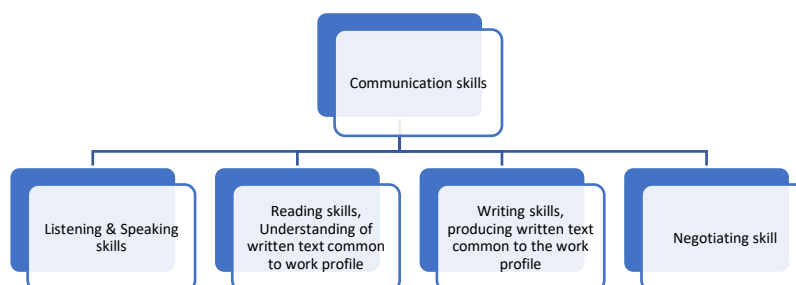


Note. Adapted from “A Reference Framework for Continuous Improvement of Employability Assessment”, by L. Moldovan, 2020, *Procedia Manufacturing*, 46, pp. 271-278. Copyright 2020 by Elsevier.

As can be seen in the figure, communication skills are categorized in the group of Interpersonal skills, together with organizational skills, teamwork and collaboration, sociability and collegiality,

empathy and compassion while critical thinking and innovative thinking form another group. Each sub-group is then further explained with specific competences. For example:

Figure 2
Sub-Competences of Communication Skills



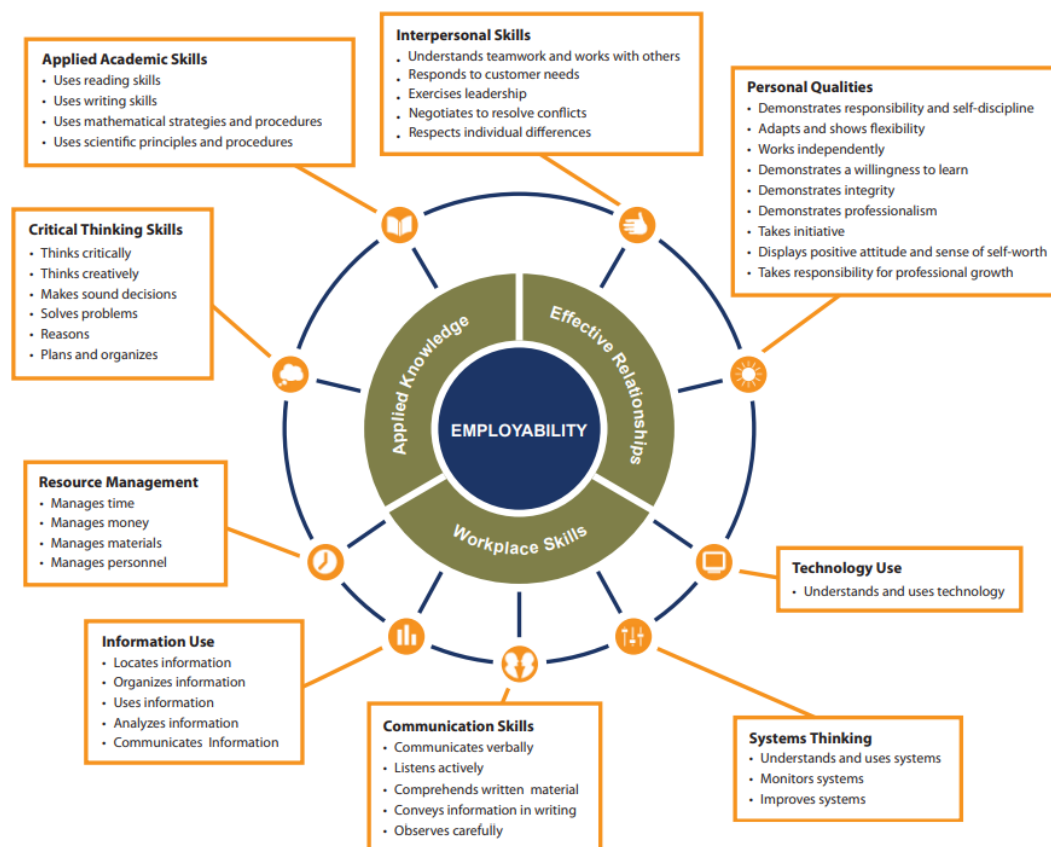
Note. Adapted from “A Reference Framework for Continuous Improvement of Employability Assessment”, by L. Moldovan, 2020, *Procedia Manufacturing*, 46, pp. 271-278. Copyright 2020 by Elsevier.

Cook (2020) added into communication skills as the ability to maintain digital communication through electronic devices, using communication functions of digital platforms. Particularly, communicating via Zoom or Google Meet which is popular as a conferencing platform, users should have been able to initiate, to join or re-join meetings, communicate in chat box and use reaction buttons to express their opinions and emotions. Once employees are able to do these tasks, their communication skills are upskilled to fulfill the requirements of new working models, namely, hybrid and remote ones.

In *The Reference framework of key skills for employment and assessment indicators*, Moldovan (2020) also mentioned a set of specific skills, which are directly job related. However, in the scope of this study, we just referred to transversal ones as those are skills that match with the term “employability skills” we used in the study.

While the above framework is established as a part of *the Continuous Improvement for Employability Assessment (ASSESS)* project for European countries, the U.S. Department of Education also develops *Common Framework for Employability Skills* based on an inventory of existing employability skills standards and assessments, as follows:

Figure 3
Common Framework for Employability Skills



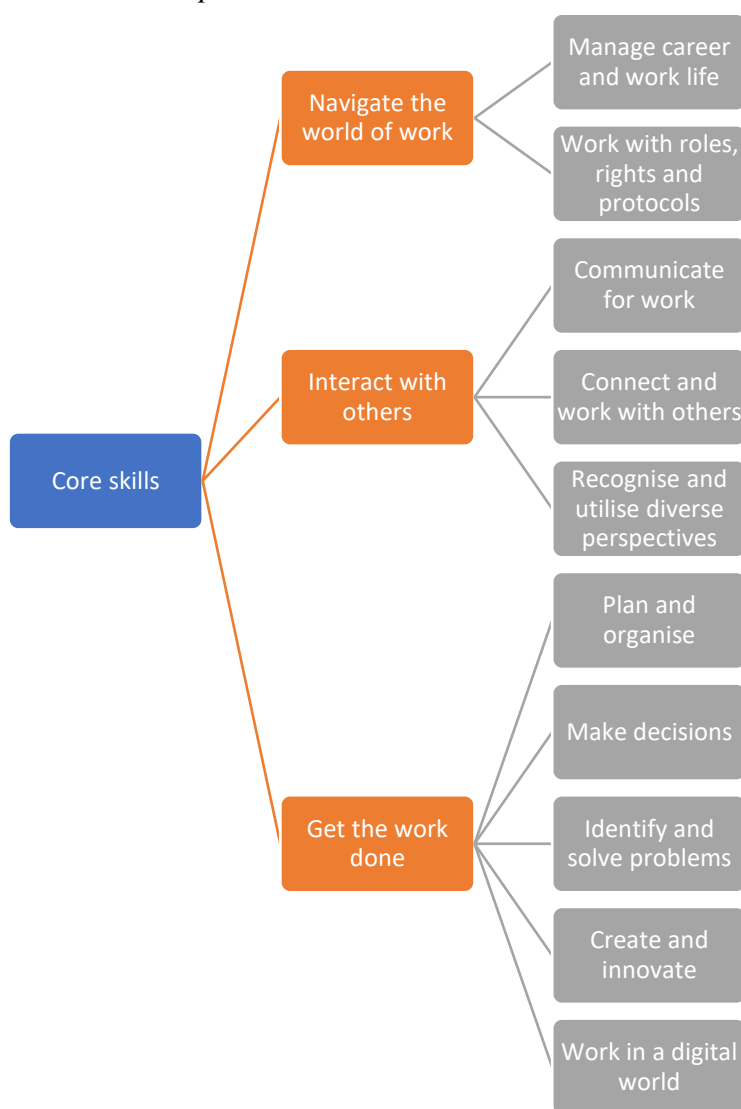
Note. Adapted from *Employability Skills Framework*, by U.S. Department of Education, n.d. (<https://cte.ed.gov/initiatives/employability-skills-framework>). Copyright by the U.S. Department of Education.

In this framework, employability skills are divided into three main categories: Applied Knowledge, Effective Relationships and Workplace Skills, each of which includes sub-skills. Even though compared to the framework developed by Moldovan (2020), communication skills and critical thinking skills belong to different skill groups, they are still essential part of the framework.

Putting employability skills another name, Australian Department of **Figure 4**

Employment, Skills, Small and Family Business build *The Core Skills for Work Developmental Framework (2018)* to define and assess crucial skills and knowledge for successful participation at work. In this framework, skills are categorized in three clusters: (1) navigate the world of work, (2) interact with others and (3) get the work done. Communication skills belong to the second cluster and a part of critical thinking – decision-making skill is a component of the third one.

The Core Skills for Work Developmental Framework



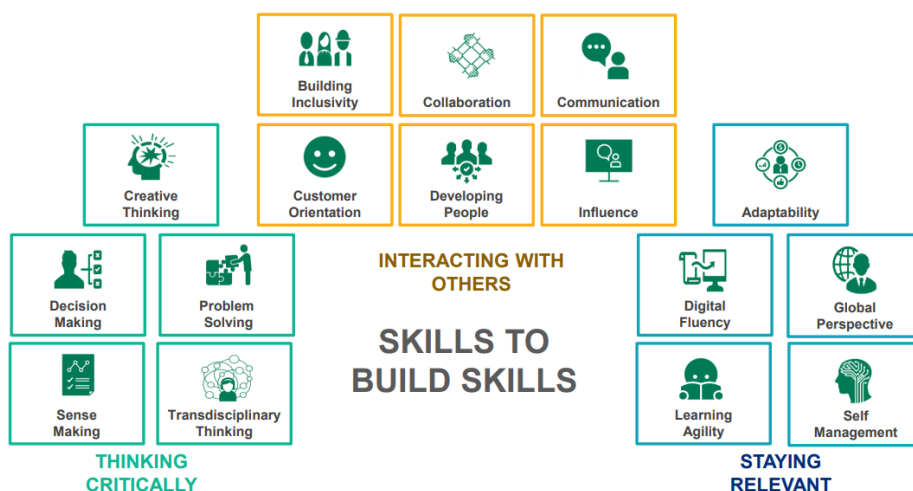
Note. Adapted from *Core Skills for Work Developmental Framework*, by Department of Employment, Skills, Small and Family Business, 2018. Copyright 2013 by the Commonwealth of Australia.

In Asia, not many countries have developed a complete set of employability skills, except for Singapore. The country has formulated a framework called Critical Core Skills, which comprises a total of sixteen (16) competencies grouped into three (3) clusters of skills that workplaces consider most essential. They are: Thinking Critically – Interacting with Others – Staying Relevant. Each of the skills has its own description and proficiency level

descriptions, together with recommended Knowledge and Abilities for a person to show evidence of the skills. This framework is a reliable reference for individuals who need to figure out which skills they should possess to perform in the job roles, for employers who desire to reskill and upskill their employees and for training providers who have intention of develop soft skill curriculum. The skills of the framework can be seen as follows.

Figure 5

Critical Core Skills Developed by the Government of Singapore (2019)



Note. Adapted from *Critical Core Skills*, by the Government of Singapore, 2019 (<https://www.skillsfuture.gov.sg/initiatives/mid-career/criticalcoreskills>). Copyright by the Government of Singapore.

While many frameworks have been figured out in many parts of the world, especially in wealthy countries, in Vietnam, a developing country, there has not been any framework for employability skills developed. However, from the above outstanding frameworks, it can be seen that communication skills and critical thinking are among the most common components of the employability skill framework. In this study, with limited time and resources, we just focused on these skills, which are essential employability skills for students (Jackson, 2013).

2.2. Peer Assessment

Peer assessment is a form of assessment in which students give feedback or grades to their peers on a product or performance. This activity can include peer grading, giving feedback, evaluation or review (Topping, 2021). In our research, students both gave comments on their peers’ work and filled out a marking form.

The benefits of peer assessment towards student learning have long been affirmed by numerous studies (Li et al., 2021). According to Sanchez et al. (2017), these benefits can be classified into three categories: meta-cognition, motivation and

transferable skills. However, the learning process is not a sole straight path, but it is like a flow combining three smaller ones – the cognitive process, emotional process and social process (Illeris, 2002) – which occur simultaneously. Current literature on peer assessment indicates its effects on all these three dimensions.

It is quite easy to find the influence of assessing peers on the process of gaining knowledge of students in literature. Many studies have been conducted to prove its positive impact on students' learning achievements (Barac et al., 2021; Cao et al., 2019; Chang et al., 2020; Chien et al., 2020; Hogg, 2018; Huisman et al., 2020; Li et al., 2021; Pham et al., 2020; Stančić, 2021). For example, Chang et al. (2020) integrated a peer assessment approach into virtual reality design activities for primary students in a science course and found out that students learning with this approach had higher test scores, especially in open-ended questions in comparison to the control group. In writing skill teaching, online peer feedback was supposed to be able to enhance the quality of writing aspect, globally and locally (Pham et al., 2020). Moreover, in this study, it was found that students could understand more about the writing assessment criteria by practicing the evaluation with a rubric. For higher education, Yu (2019) indicated that giving feedback on peers' academic writing works helped students more aware of the thesis/dissertation genre, especially the content and organization of a thesis. This activity also enhanced students' writing skills and the quality of their theses. Surveys on students' perceptions also affirmed the influence of peer assessment on their learning outcomes (ArchMiller et al., 2017; Hogg, 2018; Huisman et al., 2020; Ion et al., 2019; Stančić, 2021; Wanner & Palmer, 2018). Specifically, though no significant increase in marks was found, students believed that peer assessment helped them boost their work quality (Wanner & Palmer,

2018). Students in Hogg's (2018) study felt satisfied that peer assessment contributed to their grade. Likewise, reflections collected showed students' appreciation for the usefulness of peer assessment in learning. Especially, they even believed that peer assessment was more beneficial for learning than self-assessment (Stanić, 2021). In short, findings on the impact of peer assessment on students' learning performance and achievement are the most abundant.

The use of peer assessment affects not only the cognitive process but also the emotional dimension or the affective aspects of learning (Chang et al., 2020; Chien et al., 2020; Ion et al., 2019; Planas-Lladó et al., 2018). In studies conducted by Chang et al. (2020) and Chien et al. (2020), the integration of peer assessment in the classroom was proved to motivate students more than the conventional approach. One reason given for this was that students felt safer and less stressed, thus more motivated in the class. Perceptions of students towards assessing peers were positive also due to the fact that it was able to motivate and facilitate students' learning process (Planas-Lladó et al., 2018). Beside motivation, receiving feedback from classmates strengthened the relationships between learners. They trusted, felt stronger sense of belonging to the group, and less anxious at the same time when they received peer feedback (Ion et al., 2019). However, in another study, students showed concerns about their friendship or the risk of team conflict when they tried to ensure the fairness of their marks for peer's performances (Carvalho, 2013). In brief, despite initial anxiety and concerns relating to maintaining relationships in class, peer assessment can create a comfortable and motivating learning environment for students.

The last process – social process refers to students' interactions, social learning and socialization (Poscente, 2006).

Barac et al. (2021) found that peer review could boost the collectivism or solidarity among students when they had to worked together towards shared goals. Receiving comments created more open-minded listeners and sympathetic speakers. Planas-Lladó et al. (2018) indicated that students with more experience of assessing peer tended to be more involved in teamwork. They created more positive interactions with peers in a team even though they received criticism. These interactions simultaneously enhanced students' communication skills as they were able to figure out ways to convey their ideas effectively to their peers after peer assessment. Likewise, according to Ion et al. (2019), students could communicate more effectively with their peers when receiving feedback regularly. The use of peer assessment in improving communication skills of nurses and doctors is also popular. In a study where nursing students were required to provide written comments to their peers' videos on YouTube, the research recorded a significant increase in students' communication performance when they received feedback from peers. Especially, interactions where patients are the center were observed to happen more frequently thanks to peer assessment (Lai, 2016).

In fact, regarding the benefits of peer assessment to the cognitive process, students not only realized that they could improve their performance or achievement but also increase their cognitive skills such as critical thinking. Specifically, to improve learners' development of information literacy, Hwang et al. (2023) integrated peer assessment (PA) into digital storytelling to help learners reflect on and evaluate their videos according to rubrics, and further improve their videos. The results of the quasi-experiment showed that the PA-enhanced approach was more successful than teacher assessment in promoting student knowledge about information literacy, self-efficacy, and

critical thinking abilities. Similarly, Chang et al. (2020) believed that higher scores in open-ended questions of students learning with the peer assessment approach were evidence of their better high-level thinking ability and creativity. In comparison, from statistical results, it was found that students learning via a peer-assessment approach had considerably higher critical thinking skills than those who did not (Chien et al., 2020; Hogg, 2018; Pham, 2021; Planas-Lladó et al., 2018; Wanner & Palmer, 2018; Yu, 2019). In these studies, although critical thinking skills are supposed to be essential employability skills, their improvement after applying peer assessment in classrooms seems to be just the "by-product" as the main purpose of the research was to enhance students' knowledge or language skills.

However, there are few studies focusing solely on the development of critical thinking during peer assessment. For example, Jiang et al. (2022) developed a peer assessment technique based on the idea of knowledge building approach to enhance the critical thinking abilities of a class of 33 undergraduate students in just one semester. The findings revealed that students' critical thinking abilities had significantly increased and there was a significant correlation between these skills and peer evaluation in the knowledge-building community, including both peer comments and peer grades. In other words, the promotion of critical thinking skills among students was greatly aided by comments expressing strong disagreement. Another noticeable perspective to look at the importance of peer assessment to the improvement of critical thinking skills is from the cultural eye. Research into this issue is popular in Western countries but quite rare within a Confucian heritage context (Zhan, 2021). Zhan (2021), with a design characterized by six elements, examined the effects of online peer assessment in a General Education course on the growth of critical thinking in

Hong Kong undergraduates (i.e. online peer assessment training, provision of guiding questions, peer feedback requirements, anonymity, student evaluation of the usefulness of peer feedback and summative use of online peer assessment). Examination of the participants' electronic journals showed that the experimental groups significantly improved their ability to think critically.

Within the Vietnamese context, another country bearing the influence of Confucianism, where less attention has been paid to equipping students with employability skills (Nghia, 2018), studies conducted to investigate the influence of peer assessment on these skills, especially critical thinking and communication skills are even rarer. Therefore, our study is expected to fill this gap.

3. Methods

This study is cross-sectional survey research in which we wanted to investigate students' perceptions towards the effectiveness of peer assessment on the development of their communication and critical thinking skills.

The participants of the study come from a university in Hanoi, Vietnam. All of them were freshmen who were taking a course called "*Skills for University Success*". In this course, students were supposed to gain adequate and essential skills to adapt to the new environment – life at the university. Regarding peer assessment, from week 2 to week 5 of 11-week course, the students were divided into groups of 4 students with a topic related to study skills and then required to present on it. For the last two weeks, students reported on their final group projects whose products were 10-minute videos or 15-minute presentations on student life-related topics. All presentations were carried out online due to social distancing in Covid-19 Pandemic and

followed by assessment sessions. The assessment varied from oral or written comments, reactions and scores via both Zoom and Google forms from other classmates and the teacher. Except for those who gave oral comments or reacted on Zoom, others could stay anonymous with their assessment to feedback receivers. To engage students in comment sessions, a participation policy was established. In addition, presentation groups were required to submit a post-presentation report on work share among members and their reflections on the experience.

At the end of the course, a questionnaire was delivered to 299 students in 06 classes which had conducted peer assessment activities during the term, 226 responses were received. Among these students were 192 females and 34 males, at the age of 18 to 20. Due to the Pandemic, the questionnaire was delivered to students via Google Forms.

The questionnaire was to find out how they think about the benefits of peer assessment, especially in terms of communication and critical thinking skills. The two-part structure of the survey is as follows:

Part 1 was about students' personal information such as age, gender and email address.

Part 2 included two types of questions: close-ended and open-ended ones. These questions aimed to find out how students perceived the effectiveness of peer assessment on their communication and critical thinking skills. The questions were devised based on the Common Framework for Employability Skills created by the U.S. Department of Education to design questions for our survey. This is because it is a clear and detailed framework with categories matching the two types of skills we were investigating: critical thinking and communication. Besides, the questions were

adjusted to fit the situation, which were about the development of communication skills and critical thinking skills in the context with peer assessment. In the questionnaire, 16 questions with a 5-point Likert scale (1 denoted “strongly disagree” and 5 “strongly agree”) involved subskills of communication (10 questions) and critical thinking skills (6 questions) while the 3 open-ended questions at the end of the survey asked students to give more opinions on the advantages and disadvantages of peer assessment as well as things that teachers can do to improve this activity (Appendix 1).

The data collected then was sorted and analyzed descriptively with the software SPSS version 26.

Table 1

Students’ Perceptions Towards the Influence of Peer Assessment on Their Communication Skills

Statements	N	Mean	Std. Deviation
	Statistic	Statistic	Std. Error Statistic
Via peer assessment, I have learnt to actively listen to others’ comments/opinions.	226	4.36	.061 .914
I am aware of how to express my idea the most appropriately and effectively.	226	4.26	.062 .936
While giving feedback, I am aware of creating safe and friendly atmosphere.	226	4.40	.060 .905
I become more confident in expressing my opinion after each time giving peer assessment.	226	3.91	.065 .982
I have learnt how to give constructive comments.	226	4.16	.061 .920
I have learnt to control my voice so that it is easier to understand.	226	4.06	.067 1.003
I am aware of caring and understanding my peer’s emotion before giving feedback.	226	4.21	.065 .983
I have learnt to give encouraging comments.	226	4.23	.065 .984
I am able to express myself more clearly.	226	3.88	.073 1.099
I know how to use other ways to show my response to my peers’ performances. (using reactions or icons in Zoom)	226	4.33	.063 .943

4. Results

The data was analyzed descriptively by SPSS. The internal consistency proved to be high with Cronbach’s alpha $\alpha = .93$ for questions on Communication skills and Cronbach’s alpha $\alpha = .87$ for the Critical thinking skills group (Appendix 2).

4.1. Effects of Peer Assessment on Communication Skills

In the questionnaire, there are 10 questions asking students to evaluate the influence of giving and receiving feedback on their communication skills. The results are shown in the table below.

As can be seen from the table, the majority of students showed their appreciation for the effects of peer assessment on many aspects of their communication skills (Mean ranges from 3.88 to 4.4).

Students also tended to be more thoughtful when communicating with peers after each time giving comments. Most students are more conscious of the importance of having a secure and welcoming environment when giving evaluation to their peers ($M = 4.40$, $SD = .905$). A great number of students also cared about their peers' emotions as they were about to express their points ($M = 4.21$, $SD = .983$) by constructive ($M = 4.16$, $SD = .920$) and supportive comments ($M = 4.23$, $SD = .984$).

Peer assessment activity gave me the chance to express my thoughts as well as to discuss thoroughly, which I did not have in high school. I suppose the best value of this activity is that I have a safe environment to share suggestions, two-way communication. Even when it's not direct contribution, observing and listening to the discussion brings new perspectives, lessons, and ideas. (SS1)

I find assessment activity can also increase improvisation and emotional management when receiving evaluations from classmates. (SS2)

Moreover, they become more active listeners by practicing peer assessment ($M = 4.36$, $SD = .914$) and know how to express their opinions non-verbally in online platform ($M = 4.33$, $SD = .943$). One of the differences between face-to-face and online learning is the way students interact with each other. While the former allows students to be more flexible in using non-verbal cues such as body language to express themselves, the latter limited this. Peer assessment seems to be able to create

chances for students to interact with peers in comfort as it allowed them to give responses by hitting reaction buttons or icons. In fact, peer assessment is said to be the mediator for students in communication while participating in learning activities.

I think that activity helped us understand each other better and be closer to implement our project more effectively, then we could become good friends. (SS3)

[Peer assessment] helped us interact with our classmates better, become more sociable and calmer. (SS4)

However, peer assessment was less effective in helping students boost their confidence and self-control. Even though students are well aware of the appropriateness and effectiveness in delivering their peer feedback ($M = 4.26$, $SD = .936$), a small group of students find it hard to become confident to express themselves confidently ($M = 3.91$, $SD = .982$) and clearly ($M = 3.88$, $SD = 1.099$). Similarly, not so many students agree peer assessment helps them know to control voice to make themselves understood ($M = 4.06$, $SD = 1.003$).

Sometimes language limitations and translating thoughts into constructive comments also cause difficulties for me. (SS5)

As a comment giver, I have a bit of difficulty choosing the right words, making a positive contribution and not causing misunderstandings or displeasing to peers, but still being realistic. (SS6)

In short, most students agreed that many of their communication skills had been improved after peer assessment, especially giving peer evaluations and marking. While being more active listeners received the highest level of consensus, being able to express ideas clearly was recognized by the smallest number of students.

4.2. Effects of Peer Assessment on Critical Thinking

High order thinking is crucial to the study at university as well as the working life of students in the future. Therefore, it is one of the key components of the course “Skills for University Success”. However, the lessons in the course related to this skill mostly explain theory, which leaves a gap in the curriculum requiring students to practice

it more. Peer assessment added to this course was considered a good chance for them to apply what they have learnt in the course and develop their critical thinking skills even better.

In the questionnaire, the next 6 questions involved subskills of critical thinking that we think are important to students. They are presented in the table below.

Table 2

Students’ Perceptions Towards the Influence of Peer Assessment on Their Critical Thinking Skills

Statements	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
After giving and receiving feedback, I can realize strong and weak points of a presentation more quickly.	226	4.18	.063	.954
I have learnt to give evidence or examples to make my point more persuasive.	226	3.92	.069	1.036
I can realize fallacies more quickly.	226	3.80	.071	1.063
By giving and receiving feedback, I have learnt to deduce using provided information.	226	4.04	.063	.952
Thanks to peer assessment, I have learnt how to give information that is relevant to the topic.	226	4.21	.062	.933
Because of peer assessment, I become more curious about things around me.	226	4.02	.073	1.093

It is clear from the table that most of the students realized the impact of peer assessment on their critical thinking skills though compared to communication skills, the figures are quite lower (Mean ranges from 3.8 to 4.21). Specifically, students believed that they were able to provide proper and relevant information through practicing peer assessment (M = 4.21, SD = 0.933). This is quite similar to the figure for students affirming that they can figure out the good and bad points of a presentation faster (M = 4.18, SD = 0.954). Indeed, peer assessment helped students realize that they can use different lenses to

look at a subject or event before giving judgement, which was the thing they had never had a chance to do at high school:

I think I have learned to see things in many ways, before in high school I had very few opportunities and many times refused the opportunity to comment and evaluate other students' products. (SS7)

I have a more dimensional view of my group's work and ... also thanks to that peer assessment that we can review our group more closely. (SS8)

Relating to the ability of make logical arguments, students were less confident that they could be more persuasive by being able to give proper examples ($M = 3.92$, $SD = 1.036$). In addition, the lack of knowledge and skills was a reason for students to be more reluctant and less confident when giving persuasive assessment to their peer:

Regarding the role of a reviewer, I feel that I do not really have enough knowledge and understanding about a certain issue or topic, so sometimes I do not dare to give a comment. (SS9)

It's just that my analysis skills are not very good. (SS10)

Sometimes there are so many things I want to evaluate but I can't sum them all up, so I forget a few details. (SS11)

I'm a bit shy, so sometimes my comments aren't accurate. (SS12)

Realizing fallacies is the skill which was perceived to be least improved via peer assessment with $M = 3.8$, $SD = 1.063$. Identifying fallacies is one of the most important parts of the course, so students were expected to have more chance to practice this with peer assessment. However, it seemed that this skill is one of the most challenging competencies to students:

I need to think very carefully before giving a comment so as not to get caught in fallacies and not cause misunderstandings between individuals. ^^ (SS13)

In addition, students could learn to deduce logically based on provided information ($M = 4.04$, $SD = 0.952$) and be more curious about the surrounding environment after experience peer assessment ($M = 4.02$, $SD = 1.093$). This finding is confirmed by students' responses to the question about additional advantages

of peer assessment that they can realize:

In my opinion, peer assessment is extremely necessary when working in groups. It helps the team to accurately see the progress as well as make timely and reasonable adjustments to produce the best product. (SS14)

I see that peer assessment also has some advantages as follows: You can learn from your good points or learn from your bad points; forming the ability to take responsibility for their own comments and assessments of their classmates; form more clearly in themselves the requirements for learning, how to behave with others, thereby, adjusting or developing their own behavior and attitude. (SS15)

In short, critical thinking skills are supposed to be improved via peer assessment activities, but not as much as communication skills, according to students' perception.

5. Discussion

The study aimed to figure out how students perceived the benefits of peer assessment to their critical thinking and communication skills. The results show that the majority of students appreciated the effects of this activity to their skills.

Regarding communication skills, giving peer evaluations and marking others brought students opportunities to develop various aspects. Firstly, like what Barac et al. (2021) found, after each time of receiving other's comments, they became more active listeners who welcomed every comment with a positive attitude. A student in the study shared that he or she was friendlier and calmer after a semester doing this activity while another admitted that peer assessment allowed them to give up on their big egos and be more open. Secondly, learning to

communicate is not only learning to control the voice or talk about something attractive, but also learning to care about listeners, which is not clearly mentioned in previous studies as they did not separate the communication ability into sub-skills for more detailed investigation. Students in the study agreed that through peer assessment, they knew how to create a safe and comfortable atmosphere when giving comments. However, this does not mean that students just gave positive comments to please their peers, as a student shared: “I became more straightforward and not afraid to give opposite ideas” or another insisted that he or she could express his or her points in a comfortable and positive way. Furthermore, students reported that they learnt to give constructive feedback to their peers, thereby becoming more confident when they realized that all supportive comments were welcomed. This is similar to what Hogg (2018) found that students perceived that they were able to give critical feedback diplomatically and encouragingly. One special thing about giving peer assessment in online classes is that students were able to use emotional icons on Zoom to express their feelings and evaluations. Feeling more confident in expressing themselves is another aspect that students found had been improved. In short, while a number of studies affirmed the improvement of students’ communication skills after using peer assessment (Barac et al., 2021; Chien et al., 2020; Ion et al., 2019; Planas Lladó et al., 2014), few studies dug deep into each sub-skill of the communication skill group like what the current study has done.

In terms of critical thinking skills, like various studies, we believed that giving and receiving peer feedback can improve students’ high-level thinking. Specifically, students reported that they became more skillful in giving persuasive comments by being able to provide examples or logical arguments. Besides, they could realize the

strong and weak points in the performance more quickly. In order to do these things, students needed to understand what their peers were conveying and possessed the ability to analyze and respond to the input quickly. Similarly, in Chang’s et al. (2020), students did better in fill-in-the-blank questions, proving that they could restructure knowledge and enhance their high-level thinking competence. In the survey, students also shared that they could base on peer’s comments to perfect their performance and improve skills. It is quite the same as findings from Chien et al. (2020), Wanner & Palmer (2018). Moreover, students even went further when they engaged in evaluating, filtering and applying feedback that they found the most useful for them. In other words, they were doing backward evaluation (Pham et al., 2020). Most importantly, peer assessment could stimulate students’ curiosity, which is a crucial characteristic of a critical thinker. It seems that this trait is often ignored in studies on the benefits of peer assessment to students’ critical thinking.

In short, providing students with a safe environment where they can express their ideas freely means providing chances for them to develop many aspects, from specialized knowledge to practical skills.

6. Limitation and Recommendations

The study tried to investigate possible profits of peer assessment to students by asking them to give their perceptions towards this activity. However, these are just subjective opinions which was not necessarily what they really achieved after a semester learning to give peer comments. Besides, as no defined framework of employability skills for Vietnamese students was found or set up, the current study used a framework developed by a developed country, which might result in some mismatch with the Vietnamese

context. Another limitation of the study is that not all employability skills were investigated because critical thinking skills and communication skills are considered to be the most important ones in many frameworks and because of limited time and resources.

Further studies should be carried out to test whether or not there is an improvement in students' skills after applying peer assessment with a more suitable framework of employability skills or with a wider range of skills.

7. Conclusion

In this research, students' perspectives on how peer assessment activities actually helped develop their employability skills, specifically, communication and critical thinking skill, were examined through "Skills for University Success" course. The results found that students in the study appreciated the use of peer assessment during the course in their classrooms. Both of the processes of giving and receiving feedback are believed to provide students with a chance to boost their skills in interacting with other people and high-order thinking. Notably, in online learning paradigm, these skills are updated since the digital environment requires extra effort to integrate digital literacy. In real-world context, the digital transformative force has caused the shift to blended and remote working models; therefore, the need to reskill the old ones is urgent. Besides, they believed that various aspects of their communication skills as well as critical thinking had been improved after a semester practicing peer assessment. This study also adds to the growing body of literature that peer assessment is a valuable activity to be implemented in the classroom, not only to enhance students' knowledge or academic achievement but also practical skills, which are essential for their future work.

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Appendix 1

Questionnaire: Students' Perception

Towards the Influence of Peer Assessment on Their Employability Skills

Part 1: Personal Information

Your name (optional):

Your age:

Your gender:

- Male
- Female
- Rather not say

Part 2: Main Questions

No.	Statements/Questions	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
		5	4	3	2	1
1	Via peer assessment, I have learnt to actively listen to others' comments/opinions.					
2	I am aware of how to express my idea the most appropriately and effectively.					
3	While giving feedback, I am aware of creating safe and friendly atmosphere.					
4	I become more confident in expressing my opinion after each time giving peer assessment.					
5	I have learnt how to give constructive comments.					
6	I have learnt to control my voice so that it is easier to understand.					
7	I am aware of caring and understanding my peer's emotion before giving feedback.					
8	I have learnt to give encouraging comments.					
9	I am able to express myself more clearly.					
10	I know how to use other ways to show my response to my peers' performances. (using reactions or icons in Zoom)					
11	After giving and receiving feedback, I can realize strong and weak points of a presentation more quickly.					
12	I have learnt to give evidence or examples to make my point more persuasive.					
13	I can realize fallacies more quickly.					
14	By giving and receiving feedback, I have learnt to deduce using provided information.					
15	Thanks to peer assessment, I have learnt how to give information that is relevant to the topic.					
16	Because of peer assessment, I become more curious about things around me.					
17	What advantages of peer assessment can you recognize besides the above?					
18	What difficulty did you encounter while giving and receiving peer assessment					
19	What can be changed to improve the effectiveness of peer assessment?					

Appendix 2

Reliability Statistics

1. Questions Related to Communication skills

Reliability Statistics	
Cronbach's Alpha	N of Items
.930	10

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
C1	37.43	46.602	.805	.919
C2	37.53	46.677	.776	.920
C3	37.39	47.537	.732	.922
C4	37.88	47.688	.651	.927
C5	37.63	47.195	.747	.922
C6	37.73	47.389	.658	.926
C7	37.58	47.320	.680	.925
C8	37.56	46.194	.771	.920
C9	37.91	45.436	.732	.923
C10	37.46	47.209	.724	.923

2. Questions Related to Critical Thinking Skills

Reliability Statistics	
Cronbach's Alpha	N of Items
.870	6

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CT1	20.00	15.907	.698	.843
CT2	20.25	15.236	.720	.839
CT3	20.37	15.932	.598	.861

CT4	20.14	15.390	.782	.829
CT5	19.96	16.821	.581	.862
CT6	20.15	15.337	.654	.851

QUAN ĐIỂM CỦA SINH VIÊN VỀ ẢNH HƯỞNG CỦA HOẠT ĐỘNG ĐÁNH GIÁ ĐỒNG ĐẲNG ĐỐI VỚI KỸ NĂNG NGHỀ NGHIỆP

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Tóm tắt: Nghiên cứu nhằm mục đích điều tra nhận thức của sinh viên về việc sử dụng đánh giá đồng đẳng để cải thiện kỹ năng nghề nghiệp (employability skills) của họ, đặc biệt là kỹ năng giao tiếp và tư duy phản biện. Để đạt được mục tiêu này, một cuộc khảo sát đã được thực hiện với sự tham gia của 226 sinh viên một trường đại học tại Hà Nội đang tham gia khóa học có tên “Kỹ năng để thành công ở trường đại học”, trong đó yêu cầu sinh viên thuyết trình và đưa ra phản hồi về phần thể hiện của các nhóm khác. Dữ liệu được phân tích cho thấy sinh viên đánh giá cao lợi ích của việc cho và nhận đánh giá từ bạn học. Về kỹ năng giao tiếp, đa số sinh viên đều cho rằng thông qua hoạt động này họ đã học hỏi và nâng cao khả năng truyền đạt ý kiến, lắng nghe người khác, tạo không khí thân thiện khi phát biểu ý kiến. Về kỹ năng tư duy phản biện, đánh giá đồng đẳng giúp sinh viên xác định điểm mạnh và điểm yếu của bạn học nhanh và chính xác hơn. Nghiên cứu gợi ý rằng các giảng viên hoặc người tổ chức chương trình giảng dạy nên xem xét việc đưa hoạt động này trở thành bắt buộc trong các khóa học của họ để sinh viên có thể nâng cao các kỹ năng nghề nghiệp của họ.

Từ khóa: kỹ năng nghề nghiệp, đánh giá đồng đẳng, đánh giá bạn học, tư duy phản biện, kỹ năng giao tiếp