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**IAFOR Journal of Education: Undergraduate Education**

Volume 9 – Issue 5 – 2021

Edited by Joseph (José) McClanahan

Associate Editor: Huiyuan Ye

## Foreword

As we emerge from the global pandemic, we reflect on the differences and changes we have witnessed in our personal and professional lives, and those of our colleagues and students.

Many current undergraduates around the world have had little or no experience of what it is or was to attend classes onsite, and with face-to-face interaction with their professors, instructors, and peers. Educational systems have been forced to adopt and adapt to new processes and systems, aided by technologies, as have undergraduate research programmes and initiatives.

I am the co-author of the “Japan chapter” of the forthcoming Cambridge Handbook of Undergraduate Research (Cambridge University Press, 2022), along with Professors Reiko Yamada, Grant Black, and José McClanahan, also the editor of this undergraduate education issue of the *IAFOR Journal of Education*. Between the first draft and the final draft of the writing of the chapter we were forced to acknowledge that the depictions we were giving of practices pre-COVID-19 may no longer accurately reflect the state of undergraduate research by the time of publication. The brave new world of undergraduate education is finding its way in the context of a brave new world of the post-pandemic, where uncertainty seems the only certainty.

This issue of *IAFOR Journal of Education* offers an amazingly diverse sweep of undergraduate education, with papers offering fascinating international comparative and contrastive insights from Vietnam, Malaysia, Iraq, Portugal and the UK.

I would like to take this opportunity to thank the editor and associate, the reviewers, and the authors for their work on this issue.

I hope you enjoy reading the articles presented in this issue.

Joseph Haldane  
Editor-in-Chief  
*IAFOR Journal of Education*

## Editorial Advice

Preparing a submission to the *IAFOR Journal of Education* is more than writing about your research study: it involves paying careful attention to our submission requirements. Different journals have different requirements in terms of format, structure and referencing style, among other things. There are also some common expectations between all journals such as the use of good academic language and lack of plagiarism. To assist you in reaching the review stage for this or any other peer-reviewed journal, we provide the following advice which you should check carefully and ensure that you adhere to.

### 1. Avoiding Plagiarism

Plagiarism is a practice that is not acceptable in any journal. Avoiding plagiarism is the cardinal rule of academic integrity because plagiarism, whether intentional or unintentional, is presenting someone else's work as your own. The *IAFOR Journal of Education* immediately rejects any submission with evidence of plagiarism.

There are three common forms of plagiarism, none of which are acceptable:

1. **Plagiarism with no referencing.** This is copying the words from another source (article, book, website, etc.) without any form of referencing.
2. **Plagiarism with incorrect referencing.** This involves using the words from another source and only putting the name of the author and/or date as a reference. Whilst not as grave as the plagiarism just mentioned, it is still not acceptable academic practice. Direct quoting requires quotation marks and a page number in the reference. This is best avoided by paraphrasing rather than copying.
3. **Self-plagiarism.** It is not acceptable academic practice to use material that you have already had published (which includes in conference proceedings) in a new submission. You should not use your previously published words and you should not submit about the same data unless it is used in a completely new way.

### 2. Meeting the Journal Aims and Scope

Different journals have different aims and scope, and papers submitted should fit the specific journal. A “scattergun” approach (where you submit anywhere in the hope of being published) is not sound practice. Like in darts, your article needs to hit the journal's “bullseye”, it needs to fit within the journal's interest area. For example, a submission that is about building bridges, will not be acceptable in a journal dedicated to education. Ensure that your paper is clearly about education.

### 3. Follow the Author Guidelines

Most journals will supply a template to be followed for formatting your paper. Often, there will also be a list of style requirements on the website (font, word length, title length, page layout, and referencing style, among other things). There may also be suggestions about the preferred structure of the paper. For the *IAFOR Journal of Education* these can all be found here: <https://iafor.org/journal/iafor-journal-of-education/author-guidelines/>

#### 4. Use Academic Language

The *IAFOR Journal of Education* only accepts papers written in correct and fluent English at a high academic standard. Any use of another language (whether in the paper or the reference list) requires the inclusion of an English translation.

The style of expression must serve to articulate the complex ideas and concepts being presented, conveying explicit, coherent, unambiguous meaning to scholarly readers. Moreover, manuscripts must have a formal tone and quality, employing third-person rather than first-person standpoint (when feasible), placing emphasis on the research and not on unsubstantiated subjective impressions.

Contributors whose command of English is not at the level outlined above are responsible for having their manuscript corrected by a native-level, English-speaking academic prior to submitting their paper for publication.

#### 5. Literature Reviews

Any paper should have reference to the corpus of **scholarly** literature on the topic. A review of the literature should:

- Predominantly be about contemporary literature (the last 5 years) unless you are discussing a seminal piece of work.
- Make explicit international connections for relevant ideas.
- Analyse published papers in the related field rather than describe them.
- Outline the gaps in the literature.
- Highlight your contribution to the field.

#### Referencing

Referencing is the main way to avoid allegations of plagiarism. The *IAFOR Journal of Education* uses the APA referencing style for both in-text citations and the reference list. If you are unsure of the correct use of APA please use the Purdue Online Writing Lab (Purdue OWL), – <https://owl.english.purdue.edu/owl/resource/560/01/> – which has excellent examples of all forms of APA referencing. Please note APA is used for referencing not for the general format of the paper. Your reference list should be alphabetical by author surname and include DOIs whenever possible.

This short guide to getting published should assist you to move beyond the first editorial review. Failure to follow the guidelines will result in your paper being immediately rejected.

Good luck in your publishing endeavours,

Dr Yvonne Masters  
Executive Editor, *IAFOR Journal of Education*



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## From the Editor

As we complete our second issue of Undergraduate Education for the *IAFOR Journal of Education*, I am acutely aware of how much the educational environments have changed over the last two years. Many of us had expected that 2021 would bring positive changes, leaving the pandemic behind us. Yet we are still in the clouded midst of a worldwide pandemic, where colleges and universities are struggling to think of innovative ways to reach and engage our students now and into the future. Many questions rise to the forefront: How has technology helped or hindered our efforts? Will the classroom forever be changed? Or, is COVID-19 a “blip” in our academic journey that has forced us to reflect more fully on how and what we do as educators? These questions bring forth real concern and contemplation for teachers, professors, and students.

During these complicated times, I am reminded of bell hooks pioneering book, *Teaching to Transgress: Education as the Practice of Freedom*<sup>1</sup> (1994). Here she writes that “the classroom remains the most radical space of possibility in the academy” (12). When she wrote this collections of essays, she wanted educators to think about the “renewal and rejuvenation of our teaching practices” (12). Nearly thirty years later, we hear the echoes of her words as we confront the challenges before us in our own classrooms today. Everyday educators are rethinking and reimagining new ways of reaching out to our students who – at the same time – are experiencing new obstacles to their learning. Whether it is access to reliable internet connections or insecurities about their own personal well-being or mental health, our students must confront a new set of paradigms as they embark on their journey of learning. Educators also must deal with similar complicated issues. In some cases, the proverbial academic bubble that we once found our Universities and Colleges in has now popped. While remote learning or web-based teaching does not replace this “radical space of possibility” found in our in-person learning spaces, I still believe that we continue to do what we have always done: create spaces, places, and curriculum to meet our students and all of their complexities where they are so that they can excel in all aspects of their lives.

As a group we build on the work of researchers and academics who came before us and collaborate current colleagues who work with us now. As such, I hope the information found in this issue will help us reflect a little more about how and what we do. While we still value traditional academic spaces, our world now has porous boundaries that reach all areas in this world. As such, I am pleased to introduce you to five studies that embrace new ideas by thinking about distinct ways of connecting with students in undergraduate education, linking ideas from across these borders. The first article, “Gender Discrepancies in Online English Learning in Vietnam Amidst the COVID-19 Pandemic”, the authors reveal how gender differently assess (and value) online learning and what are some of the root causes for these variances. In the second article, “Do Cognitive Dispositions and Gender Matter in Applications of Culturally Relevant Pedagogy? A Pilot Study at an Iraqi University”, the authors examine how personal backgrounds shaped academic success in the context of a *Cultural Relevant Pedagogy*. Their results demonstrate how this pedagogy benefits from paying close attention to the individual student, taking into account the cognitive and demographic variables. The third article, “Exploring the Relationship between Socioemotional Skills and Decision-Making Styles in Health Students”, the authors explore the correlations between socioemotional skills and decision-making styles in undergraduate students of health. In the fourth one, the author study how the use of tablets to improve their motivation and their writing ability among

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<sup>1</sup> hooks, bell. (1994) *Teaching to Transgress: Education as the Practice of Freedom*. Routledge.

undergraduate students. Finally, in the article, “The code-Switching Phenomenon during Oral Presentations among the Business Programme Students”, the authors focus on students in international business and the impact and role of code-switching plays in their business courses taught in English, seeking answers to why this phenomenon exists among these students.

These five articles represent a plurality found in our global undergraduate education landscape today. It is my sincere desire that you will find them insightful and useful for you and your colleagues. As we move forward, we strive to always realize our overriding academic objectives: creating a positive, intellectual, and fulfilling undergraduate educational experience for our students.

Joseph (José) McClanahan

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### Notes on Contributors

#### **Article 1: Gender Discrepancies in Online English Learning in Vietnam Amidst the COVID-19 Pandemic**

**Dao Thi Hong Van** is an independent researcher in the Mekong Delta, Vietnam. She graduated with her Master's degree in Principles and Methods in English Language Education. Having more than ten years of teaching experience, she is keen on studying innovative teaching methods, which helps her bring engaging presentations to many international conferences and workshops. Her academic interest areas vary from distance education to technology-based teaching techniques, English teaching methods, teaching career, and professional development.  
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**Dr Khadija El Alaoui** is a scholar of American Culture whose specializations encompass History, and Peace and Justice Studies. Currently, her research focuses on the history of the Arab and Western worlds, human diversity, and cultural practices. She received her PhD in American Studies from the University of Dresden (Germany). Institutional affiliation: American University of Iraq Sulaymani (AUIS).

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**Dr Zaynab El Bernoussi** is a scholar of Political and Social Sciences. Her work focuses on the politicization of dignity, Global South cooperation, and bioethical issues. She is a member of the executive committee of the Global South Caucus of the International Studies Association (ISA). She received her PhD from the Catholic University of Louvain (Belgium). Institutional affiliation: International University of Rabat (UIR).

**Saya Omar Abdulrahman** is a researcher who combines an interest in International Studies with her training in Medical Science. She is a member of the NGO Kurdistan Society for Cancer Patient Support. Institutional affiliation: American University of Iraq Sulaymani (AUIS).

### **Article 3: Exploring the Relationship between Socioemotional Skills and Decision-Making Styles in Health Students**

**Dr Cândida G. Silva** holds a degree in Mathematics and Computer Sciences (University of Minho, 2003), a post-graduation in Bioinformatics (University of Lisbon, 2004), and a PhD in Chemistry (Cheminformatics) (University of Coimbra, 2010). Her academic and scientific background includes the participation in national and international interdisciplinary projects in the areas of pre-clinical and clinical sciences, science education, engagement, and communication. With a vast experience in teaching, in the last 5 years she has been teaching transversal subjects to undergraduate health students. Member of the Gym2BeKind project team focused on the training of communication and decision-making abilities in undergraduate health students. She authors/co-authors several papers published in scientific journals and conference proceedings.

**Dr Sara Gordo** finished holds a degree in Psychology (2007), a master's degree in Clinical Psychology and Psychotherapies (2009). In 2016, she completed PhD in Clinical Neuropsychology at the University of Salamanca. She has 10 years of experience teaching undergraduate health students, and since 2020 she is a member of the Gym2BeKind project team focused on the training of socio-emotional skills in undergraduate health students.

**Dr Ana Cristina Oliveira Rodrigues** completed a BSc and PhD in Biology at the Faculty of Sciences and Technology, University of Coimbra. She has more than 15 years' experience teaching transversal subjects to undergraduate health students and is a member of the Gym2BeKind project team focused on the training of communication and decision-making abilities in undergraduate health students.

**Dr Carolina Henriques** completed a MSc, PhD, and a Post-Doc in Nursing. With more than 13 years' experience teaching transversal subjects to undergraduate health students, in her classes she has sought to develop new models of pedagogical innovation, seeking the academic and professional success of students. She is a member of the Gym2BeKind project team focused on the training of communication and decision-making abilities in undergraduate health students.

**Dr Marlene Rosa** finished her degree in physiotherapy in July 2005, completing her master's degree in Motor Development by 2008 at the University of Porto, Portugal. In 2015, she completed a PhD in Health Technologies at the University of Aveiro (in cooperation with the University of Southampton). She is the coordinator of an academic project focused on the training of communication and decision-making abilities in undergraduate health students (Gym2BeKind). She is an author of different scientific papers addressing the challenges of teaching transversal skills in undergraduate education in health curricula.

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#### **Article 4: Using Padlets as E-Portfolios to Enhance Undergraduate Students' Writing Skills and Motivation**

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#### **Article 5: The Code-switching Phenomenon during Oral Presentations among the Business Programme Students**

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**Ms Olivia Boukydis MSW, RSW**, obtained her BAsC (Hons.) in Family & Community Social Services from the University of Guelph, Canada, and her Social Service Worker diploma from Humber College Institute of Technology and Advanced Learning, Canada. She received her master's degree in Social Work from the University of New England, USA, and is a registered social worker in Ontario, Canada. Olivia spent nine years working as a social worker in Ontario's healthcare system, supporting older adults living with complex and chronic health conditions. She currently holds a dual position at the University of Guelph-Humber as Senior Research Supervisor in the Soka Education Research Centre on Global Citizenship and faculty member in the Family and Community Social Services program. Olivia is also a PhD student at Lancaster University, UK, in the Department of Educational Research, Education and Social Justice program.

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## **Gender Discrepancies in Online English Learning in Vietnam Amidst the COVID-19 Pandemic**

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### **Abstract**

This study was conducted to investigate the impact of gender in learning English online in Vietnam under the impact of COVID-19 pandemic. 1118 students from nine universities and twelve high schools in the Mekong Delta joined in the research. The study indicated gender equality in online education by revealing few discrepancies in the two genders' perceptions about barriers to online learning, excepting for problems about technical skills, cost, and access to the Internet. The results of the mixed-method study which focuses more on quantitative approach also revealed the impacts of perceived barriers on their future online learning readiness through Discriminant Analysis and Chi-square Tests, in which gender had no impact on students' online learning decisions. Qualitative analysis also revealed the influences of economic conditions and regions as additional barriers in addition to the six factors being confirmed from Berge's framework (2005) including (1) Administrative issues, (2) Social interaction, (3) Academic skill, (4) Technical skills, (5) Learners' motivation, and (6) Cost and access to the Internet.

*Keywords:* COVID-19 pandemic, gender discrepancies, online English learning, online learning, online learning barriers

As a primary solution for education worldwide in the early time of the COVID-19 pandemic, online learning proved its prominent features in supporting the continuity of the human learning mindset (Anh, 2020; Anh & Duc, 2020). As a report by UNESCO, the pandemic had imposed the greatest interruption in educational history worldwide, leaving its adverse effects on 1.6 billion learners (equivalent to 94% learners on Earth) from more than 190 institutions of different levels (Toshiyuki, 2020). The application of online learning in that era helps to solve learning needs while ensuring time of training and graduation. Being on the mainstream of education in the world, Vietnam has an enormous impetus in applying online education throughout the country during quarantine periods. (Nha, 2020) quotes a compliment of UNICEF about “efforts by the Vietnamese education sector in prevention and response to COVID-19 set great examples for many other countries.”

To a large number of city students, accessing online learning becomes the best way for education in the context of “stay-at-home isolation”, but it is an extreme barrier for the ones living in remote areas, where the infrastructure and Internet access seem to be limited (Anh, 2020). From another perspective, gender has also caused a lot of challenges for online learning implementations, especially because females often lack confidence and experience with it (Grundy & Grundy, 1996). Similarly, a lot of researchers reported women’s disadvantages in computing classrooms (McSporran & Young, 2001), quoting (Cole et al., 1994), Spender (1997) said: “males dominate the classrooms and male priorities have shaped the subject’s image.”

The Mekong Delta, where the three main ethnics Kinh – Chinese – Khmer live together, is one of the regions which has been affected invasions from China for centuries, and the successive rules of France, Japan, and the U.S until 1975. Those brought the locals a diversity of cultural influences in addition to the conserved cultural identity of Vietnamese people. Among them, Confucianism had imposed a strong impact. Historians recorded the effect of Confucianism doctrines on women’s restriction, leading them to have an inferior social status and having their whole lives depended on male family members (Vu & Yamada, 2020). According to Rosenlee (2006), women were banned from taking imperial examinations (p.129); and therefore, literary learning was only a reservation for male privilege. Since the famous proclaim of Mao Zedong in the 1920s: “women hold up half of the sky”, the status of women in the society in Vietnam and other Confucianism-affected countries had only been improved (Vu & Yamada, 2020).

To deal with the urgent call for switching to online education due to the pandemic, the Mekong Delta, with those above-mentioned geographical features and demographics, has had to confront a plethora of challenges to fulfill the educational mission. Questions about which obstacles, as well as gender issues, provoke our curiosity the most. Based on that foundation, the research has been done to determine their answers, in addition to bridging the reflection to the reality between what has been existing in the home country to the present status of women’s educational rights. To the scope of our research, the only concentration is placed on universities and high school students in the Mekong Delta of Vietnam, who are learning English as a school subject during the spreading time of Coronavirus in the early of the year 2020.

## **Literature Review**

### **Online Learning**

Online learning is also well-known as web-based learning, Internet-based learning, virtual learning, cyber learning, net-based learning, and is also a subset of distance learning (Urdu & Weggen, 2000). It is an educational system in which the Internet facilitates teaching and

learning in a new learning condition, where teachers and learners are physically separated (Newby et al., 2000). According to Allen and Seaman (2007), online learning is defined based on 80%+ of learning content delivered online. Smart and Cappel (2006) have a similar definition while considering online learning as instructions distributed to learners electronically via the Internet, Intranet or multimedia platforms like CD or DVDs. The concepts of synchronous and asynchronous online learning are used to refer to the two different types of learning, in which synchronous refers to a must of learning where teachers and students are asked to work together at the same time, and asynchronous provides online learning opportunities with no time restriction and teachers and learners are not required to be online simultaneously (Hrastinski, 2008).

Regarding strengths of online learning, Dabbagh and Bannan-Ritland (2005) reported its existence with all dynamic, unbound, and the practice of diversity pedagogical active learning and learner-centered approach in comparison to practices of physical classrooms with fixed time and face-to-face interactions between teachers and learners (Barker, 2003; Browne, 2005). Online learning is also highlighted by its flexibilities (Atack, 2003; Fish, 2016; Horspool & Lange, 2012; Platt et al., 2014; Sargeant et al., 2004; Wyatt, 2005) and convenience for disadvantaged learners with problems in family and health issues (Dyrbye et al., 2009; Kokko et al., 2015), and also the proliferation and popularity (Landrum et al., 2020).

While leaving those impressive outstanding perspectives, much research also reports a wide range of challenges stakeholders face with this virtual learning. Muilenburg and Berge (2005) pointed out the lack of social interaction as the most decisive student barrier to online learning, followed by administrative and instructor issues and time and support for the study. Learner motivation came closely, and the minor impacts belong to technical problems and cost-related issues. Mullen and Tallent-Runnels (2006), otherwise, found that affective supports – “communication from instructors to students that the students are important and valued individuals”, cause the most extreme barriers (p. 258).

### **Online Learning in Vietnam Amidst the COVID-19 Pandemic**

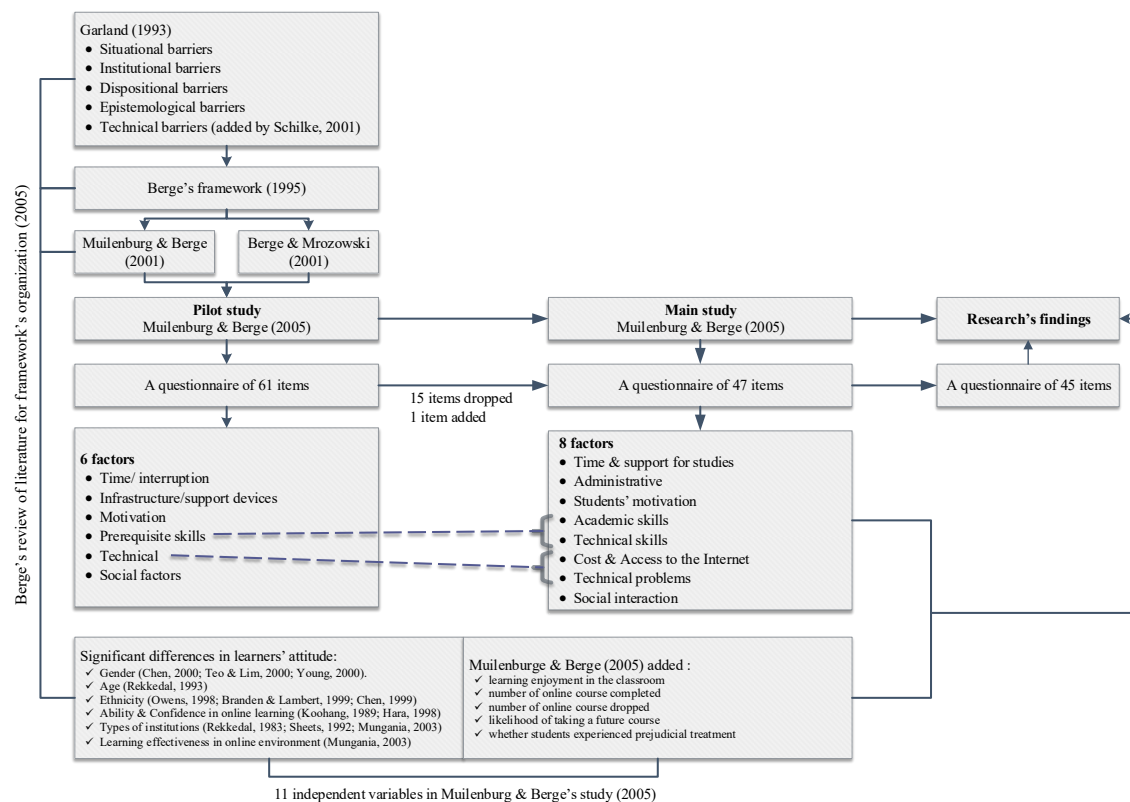
Online learning existed in Vietnam since the arrival of the Internet in the 20th century. Its popularity among students, however, has just become wildly visible in recent years under the enforcement of Ministry of Education and Training (MOET) in Vietnam about online education (Ha, 2020). Also under Ha’s statement, many universities and high schools started deploying this style of learning variously in accordance with their educational purposes. When Vietnam and the whole world confronted the widespread infection of Coronavirus, the spirit of “continuing to learn despite school closure” (Nha, 2020) inspired educators and learners to encounter online learning while simultaneously fighting the COVID-19 pandemic. It can be considered that the quarantine time during the first quarter of the year 2020 in the South of Vietnam was the first time all learners in the Mekong Delta have experienced online education. This is primarily a way to confront the disease; and yet, it opened the new door for Vietnamese education after all. Employing online learning becomes the more significant since it provides the practical reasons for all stakeholders to have in-time implementations, especially to foster online learning in our digital era.

### **Measurements of Online Learning Difficulties – Berge’s Theoretical Framework (2005)**

Inheriting previous studies of Garland (1993), Muilenburg and Berge (2001), and Schilke (2001), the study of Muilenburg and Berge (2005) was conducted to investigate student barriers to online learning in the United States. In that study, the authors revealed 45 items being used in the questionnaire as their research instrument. These were categorized into the seven groups

of barriers, directly causing difficulties for distance learners at different levels and ages. Details about them will be presented in Figure 1 as below.

**Figure 1**  
*Berge's Review of Literature Framework (2005)*



### Aims of this Study

This study was done in order to find the discrepancies between university male and female students in Vietnam when learning English as a Foreign Language (EFL) online amidst the COVID-19 pandemic. Specifically, we clarified the differences about online learning obstacles perceived by the two genders; secondly, efforts were made to point out whether gender makes differences in students' readiness to take future online English courses. As a point of departure, we used previous literature about online education and its discrepancies in terms of gender to reveal the results of this study which are expected to reflect the reality of online learning and its gender-related issues in Vietnam.

To address these purposes, the following research questions are:

- What differences are there between male and female EFL learners' perceptions toward barriers in learning English online?
- To what extent do these perceived barriers affect male and female EFL students' readiness of taking future English online courses?
- Does gender matter in students' readiness of taking future English online courses?

## Research Methodologies

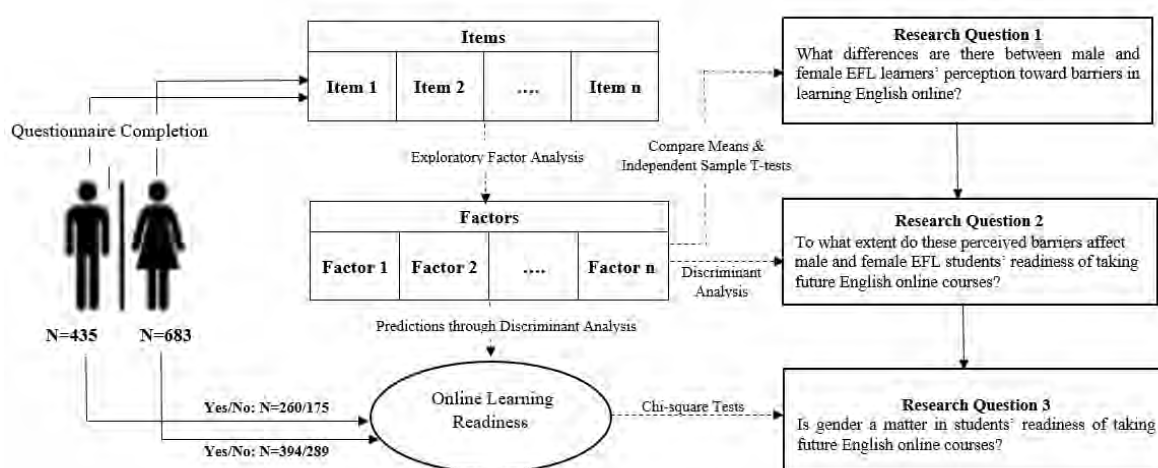
A mixed-method study which focused primarily on a quantitative approach would be applied in our context. The mixed-method orientation helps provide a more profound and broader understanding of the phenomenon than the research being done with only a quantitative or qualitative approach (Hurmerinta-Peltomäki & Nummela, 2006). Additionally, O’Cathain et al. (2010) believe that integration helps persuade readers to be more confident in the finding and conclusions researchers draw in the study.

In this study, the first focus would be addressing online learning barriers and how they are perceived by male and female learners. An adaptation of Berge’s framework (2005) would be applied to confirm the obstacles that Vietnamese students face when learning online; especially with their answers from the interviews, extra barriers are hoped to be discovered after qualitatively analyzing. To raise the appropriateness of Berge’s framework in 2005, an Exploratory Factor Analysis with Principle Axis Factoring and Promax rotation method would be run.

The first research question was to evaluate the discrepancies between males’ and females’ perceptions toward online learning barriers. Means for each factor were processed by SPSS. An independent sample T-test was then run to compare means of each between male and female learners.

In line with the second research aim, we provided predictions about the readiness of taking future online courses between male and female learners, under the impact of perceived barriers. Discriminant analysis, therefore, has been applied twice, separately on each gender. Next, Chi-square Tests would be employed to provide the first confirmation about the relation between genders and online learning readiness based on the students’ answers: “Yes” or “No” for the question: “Are you be ready to take future online courses?” Details about the research model will be presented in Figure 2.

**Figure 2**  
*Research Model of the Quantitative Approach*

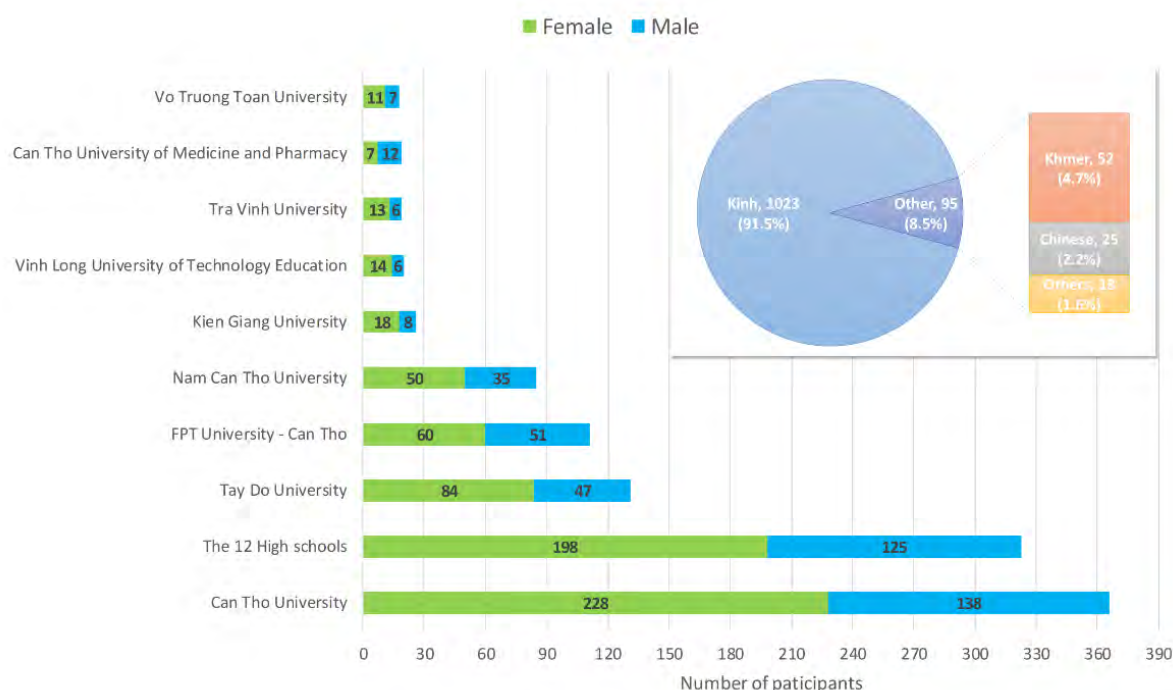


## Participants

1118 students studying English as a Foreign Language at nine universities and twelve high schools in the Mekong Delta, participated in the research. While being invited to complete the questionnaire launched on Google Form from April to July 2020, the students were learning English as a compulsory subject online synchronically to meet requirements of MOET in Vietnam due to the impact of the COVID-19 pandemic. Among them, there are 683 female students (61.1%) and 435 male students (38.9%). Proportions of gender and participants contributed by universities and high schools as well as their ethics would be illustrated in Figure 3.

**Figure 3**

*A Description of Participants According to their Institutions and Ethics (N=1118)*



## Research Instruments

Berge's theoretical framework (2005) about student online learning barriers is used as the research instrument in our study, with some minor adjustments to fit our context. Basically, the number of 45 items in the questionnaire received the deletion of four issues; in which, three of them are related to technical issues because they are widely discussed and become predictable in many research. Therefore, we reserved our concerns on other factors and made efforts in seeking new ones. Furthermore, when almost participants are at the age of 15 to 22, the item "fear family life will be disrupted" has been removed due to its inappropriateness. The remaining 41 items were translated and a Vietnamese version was formed to ease online learners' reading and understanding. They were asked to rate all statements in their right feelings in the 1-5 Likert Scale, ranging from completely agree to completely disagree.

Cronbach Alpha was used to check the reliability of the 41-item questionnaire. Table 1 shows that all values are over 0.6 and the Correlated Item-Total Correlations are over 0.3. According to Nunnally and Bernstein (2007), the questionnaire is qualified to be studied in our context.

**Table 1**  
*Cronbach Alpha of Each Cluster in the Questionnaire*

Clusters	Number of items	Cronbach Alpha
Administrative/Instructors' issues	11	0.89
Social interaction	06	0.86
Academic skills	06	0.91
Technical skills	06	0.92
Learners' motivation	05	0.76
Time and support for study	04	0.76
Cost and access to the Internet	03	0.80

## Findings

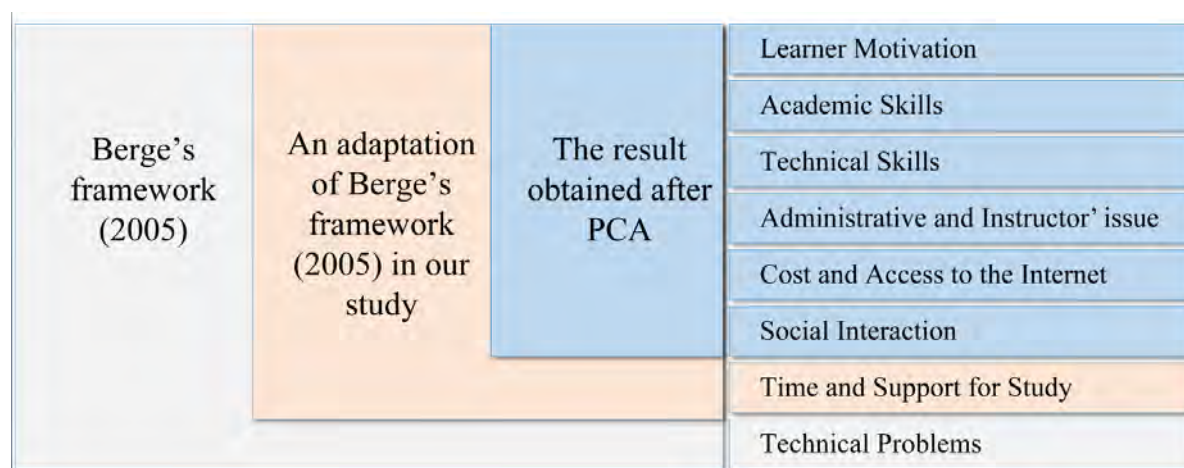
This section firstly reported an overview of EFL learners' perception toward online learning barriers in terms of gender. Its following sections revealed the results of Discriminant Analysis as the impact of those perceived barriers on male and female students' readiness of taking future English online courses. In search of finding the effect of gender, once again, the prediction of this matter would be presented through the result of Chi-square Tests. Combining with content analysis of qualitative data from answers of the interviews, the findings would provide significance of the whole research.

### Discrepancies between Male and Female Students' Perceptions Toward Online Learning Barriers

An Exploratory Factor Analysis with Principal Axis Factoring extraction and Promax rotation was used in the study. After deleting all items being loaded into more than one item or items with loadings of 0.5 and greater, the remaining 28 out of 41 items were loaded into six groups of barriers to online learning (see Figure 4). Noticeably, while the study of Muilenburg and Berge (2005) admitted the classification of the seven groups of factors, the same framework applied to the Vietnamese context figured out the existence of six groups and eliminated all four items in time and support for the study.

### Figure 4

*A Description of Factors Affecting Online Learning Barriers from Berge's Framework (2005) to the Current Study*



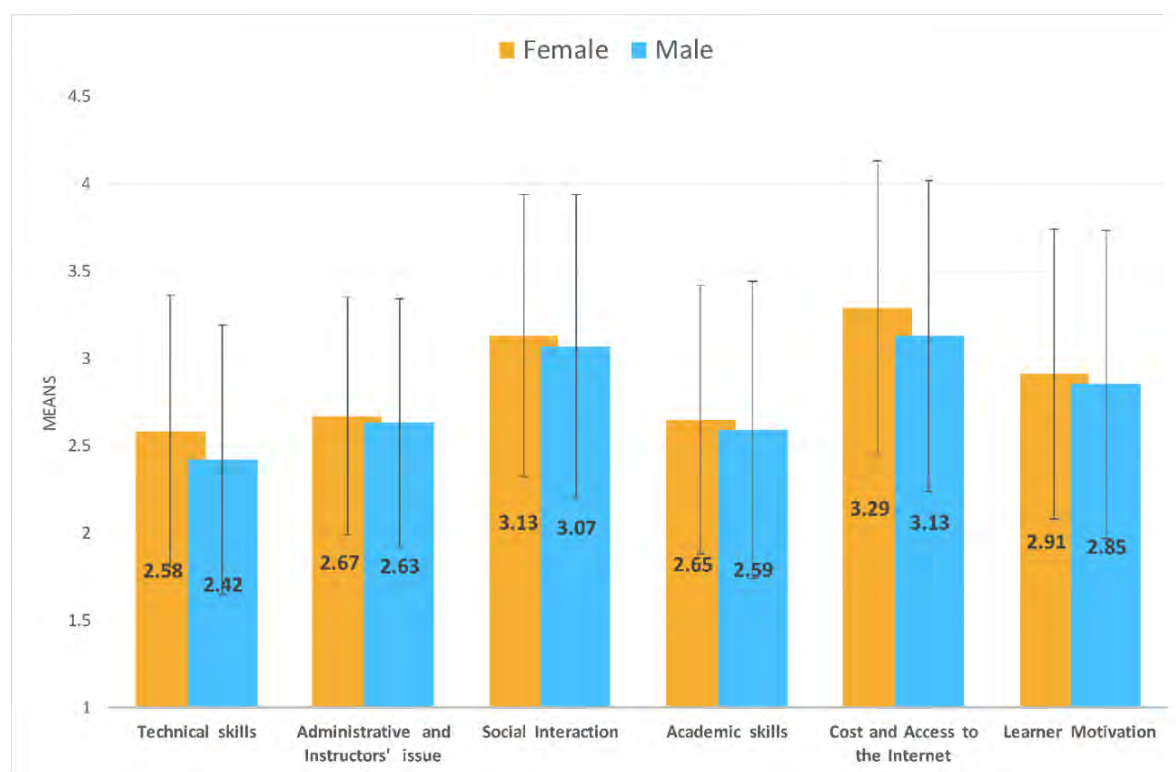


To investigate the differences between male and female students' perceptions about online learning barriers, independent sample T-tests were run to analyze and compare the means of each factor between the two genders. At first glance, female learners perceived more extreme levels of difficulties than their male counterparts. The chart also indicated that both genders ranked all hindrance factors similarly through their ratings on the questionnaire. Specifically, Figure 5 shows that cost and access to the Internet caused the most difficulties, where the highest means of 3.29 and 3.13 for schoolboys and schoolgirls, showed respectively. As can be seen from the chart, social interaction closely stands for the second position with 3.13 for females and 3.07 for male learners.

Regarding the two genders' perception, the results of the Independent Sample T-test pointed out the two groups of factors, namely, cost and access to the Internet ( $p=0.003$ ) and technical issues ( $p=0.001$ ), had created light discrepancies, but statistically significance between male and female learners toward online learning barriers. These two factors had caused greater impacts on females' virtual learning than that of the counterpart, which figures correspondingly stood at 3.29 and 2.58 for females: and 3.13 and 2.42 for males.

**Figure 5**

*Mean Scores of Perceived Barriers Between Male and Female EFL Learners*



**Table 2**

*Discrepancies Between Male and Female EFL Learners' Perception Toward Online Learning Barriers*

		Means	SD	t-values	Sig (2-tailed)	df
Technical skills	Female	2.58	0.78	3.23	0.001	925.7
	Male	2.42	0.77			
Administrative and instructors' issues	Female	2.67	0.68	0.98	0.331	892.8
	Male	2.63	0.71			
Social interaction	Female	3.13	0.81	1.11	0.277	874.5
	Male	3.07	0.87			
Academic skills	Female	2.65	0.77	1.19	0.233	1116
	Male	2.59	0.85			
Cost & Access to the Internet	Female	3.29	0.84	3.05	0.003	884.8
	Male	3.13	0.89			
Learner Motivation	Female	2.91	0.83	1.13	0.264	886.028
	Male	2.85	0.88			

### **Qualitative Reports on Males and Females' Perceptions about Learning English Online in Connection with Perceived Barriers**

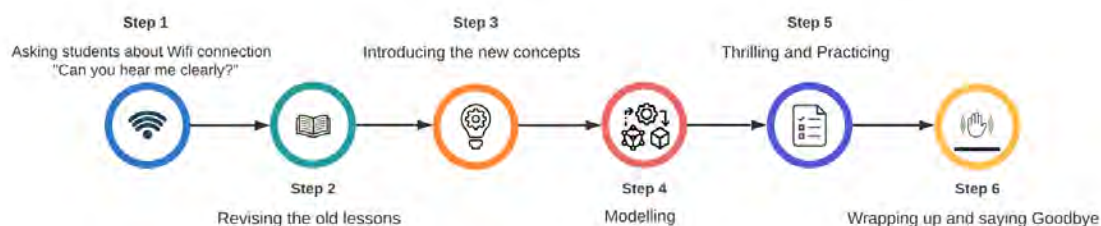
Informal interviews were done on the sixty-seven volunteers of the total of 1118 who filled out the questionnaire. 20/67 of them were male (29.9%) and 47 were female (70.1%). They were ready to support the research with qualitative questions by chatting online in the average time of fifteen minutes per student. The whole process took five weeks for collecting data from their answers. The discussed issues fundamentally were based on students' insights of their judgments about online learning barriers, in addition to sharing about their perceptions that a check on the 1-5 Likert Scale seems to be unable to expose perfectly. Moreover, students were also invited to state their opinions about online lessons in learning English. To start with the results, it was relatively surprising with the longer and stronger explanations that most female students expressed their barriers on the items related to technical issues, cost, and access to the Internet. Male students voiced lighter attitudes toward similar concerns. It logically supports the females' quantitatively high ratings from the questionnaire.

#### *(a) Learning English Online: The Reception from Students*

When being asked to describe a process of an online English lesson and present their own opinions about whether students are experiencing a traditional or modern learning method, surprisingly, all respondents described a similar motif (Figure 6). They believed to a certain degree that they were studying in a traditional way, and there were not as many differences compared to their on-campus lessons. 31/67 participants revealed that this was the first time they have encountered online learning and so have their teachers. They continually started by repeating the same phrases: "Can you hear me clearly?" until all students say they are OK with the Internet connection. Students have carefully revised the previous lessons with teachers' instructions before moving on to the new ones. Being similar to learning in the physical classroom, students are guided to practice the new structure with friends and teachers, with limited time and cyber-space interaction. They also felt it hard to have group and paired works for free practices like they did at school. The lessons normally end by teachers' wrapping up and the saying goodbye time for everybody.

**Figure 6**

*A typical Online English Lesson in the Mekong Delta in the Context of COVID-19 Pandemic*



43/67 students said they were learning traditionally but with a lack of social interaction between teachers and students as well as among other students. 22/67 respondents said they were not motivated while learning English online because they could not interact with their teachers or their friends. Sometimes they could not ask teachers anything which lead them to misunderstand, and subsequently, they fell behind the others and became lost afterward. Respondent #891 said:

*...It seems that my teacher uses less spoken English than she teaches in the classroom. My friends often said they did not understand their teachers and they needed a lot of translation. Personally, I am not in their favor. I still prefer learning English by hearing English regularly, especially from my teacher's instructions...*

In contrast, some students claimed that learning English online was a modern learning style since they had to study with technology, computers, and especially learning from a distance. 16/67 students welcome online learning by stating that technology will be a must in the future, so getting acquainted with them right now is ideal enough.

*(b) Cost and Access to the Internet*

The invited 67 volunteers had strong arguments both “for” and “against” online learning under the effects of cost-related issues and Internet connection in their learning process. Both genders complained about the interruption or the lag in Wi-Fi as well as money spent on 3G for online learning. Male students paid attention to the cost of Internet payment as strongly as the female students. When asked specifically about how much money they spent, only one male respondent #259 said he had to pay VND 200.000 a month (approximately \$10), while there were seven female students specified the number of VND 30.000 a month, VND 210.000 a month, and VND 15.000 a day. Similarly, respondent #413 living in the countryside has the same problem: “My town does not have the Internet. I have to use 3G, and hence, its signal is not good enough”.

*...There were two lessons when there was power outage. My phone did not connect with 3G and I had to register for the new package. It took VND 40.000 for an online lesson. My teacher forced us to be present if we did not want to be punished. I was bored actually. (Female respondent #655)*

*...I am living in remote area; therefore, the Wi-Fi connection is not strong enough. Can you pay attention to the lesson well if you have to log in Zoom five times for a forty-five-minute lesson? I missed at least 10 to 15% the content for each lesson. (Female respondent #478)*

*...Students have to pay a lot, and some students even pay for the new installation fee.*  
(Female respondent #215)

*(c) Technical Problems*

Both male and female students who supported online learning believed in the vital existence of technology, and they awarded their recognitions by accepting all technical challenges. The male respondent #103 strongly opposed all barriers related to technical issues. He stated that:

*...Today, IT comes to secondary students as a compulsory subject. Some are even professional in the uses of Offices, including some online skills through social networks like Zalo and Facebook. Assisted functions for searching by voices and images, which benefits users a lot whenever there are problems. All barriers can be surpassed easily if everyone gives it a try.*

In addition to the expert students in technology, who were keen on learning with the online system, 15/67 students admitted that they lack understanding in ICT and were totally technophobic. Being blind with technology was not only the confession of the female students – as common sense of human bias – but also of male students. They both confessed that they had a strict limitation in learning new things, especially for technological aspects. However, the results showed that more females voiced concerns about technical problems than males, which numbers are 20 and seven respectively.

*(d) Academic Skills*

When being asked about difficulties in learning English online, a majority of students said they found it hard to understand their teachers' instructions; and a lack of confidence in answering everything in English existed as well. Participant #625 noted:

*"I totally agree with I am not good at listening, speaking, and writing. When my teacher asked me, I was confused a lot and I turn off my camera quickly as a way to escape; to be honest, I sometimes blamed it on technical problems or the Wi-Fi was lag."*

Similarly, there are other ten participants said they felt the more convenient with learning English reading online.

Regarding interactive activities, half of the participants felt it hard to be engaged in a lively atmosphere of the English class as they experienced in physical classrooms. Some joined live games such as Quizzez, Kahoot, and Quizlet with less excitement than when they have had face-to-face competition with other classmates. Problems with interaction also lead to difficulties in the efficiency of learning English online. The 67 informants of the qualitative research said they were not able to send their facial expressions to their teachers on time. Respondent #676 shared:

*...When we studied in the classrooms, just by observing our facial expressions, our teachers would immediately repeat their lessons until we felt happier with it. When we were in this virtual environment, sometimes any of us could not hear the teachers due to Internet connection issues; no one dared to ask. We were too shy. And we were afraid of being laughed by the other.*

Conversely, 17/67 informants said they felt happy with learning English online where they could hear the teacher clearer because no one turned on the microphones. Moreover, informant #176 judged there was no discrepancies in terms of learning English offline or online; and their language skills were enough to accept and respond to the new concepts from their teachers.

It can be concluded that English learning and online instructions has further areas that need to be researched. The current findings provided certainty of learners' language proficiency and learners' styles affect their "mood" in joining online classrooms. It is also inconvincible to conclude the preferences between male and female learners in learning English online. Those who made a great contribution or those who had developed gaps in learning should be studied in further research.

*(e) Other Extra-factors from the Qualitative Approach*

By taking the content analysis, the results showed that there was a great repetition of the following terms: "remote areas", "countryside", and "economic condition". A discovery of new factors influencing online learning of Vietnamese students, therefore, was recorded.

As regards geographical features, with not many big cities in the Mekong Delta, the region has a lot of remote areas where Internet has a long way to go to provide reliable service. Many towns have only just gotten electricity within the last decade, which helps people imagine how poor the conditions of these students have for learning in this region. Most universities are located in the city center, with facilities that are almost fully equipped. Therefore, some students living in the countryside feel a big gap in learning conditions in the urgent call for online learning throughout the country. 35/67 respondents said not all students have already possessed smartphones, laptops, and Wi-Fi for their study.

- ...*Economic status is different among people.* (respondent #398)
- ...*Finding a stable network in rural areas is a big challenge.* (respondent #634)
- ...*Not everyone has enough condition to study online. If the game station does not open on the day I study, how can I study?*" (respondent #1088)

### **Online Learning Barriers versus Male and Female EFL Students' Online Learning Readiness**

To clarify the influential degree of perceived barriers to the readiness of taking future distance courses of male and female learners, Discriminant Analyses were run separately for each gender. Table 3 provides the number of male and female participants with statistics on the frequency of "Yes" or "No" answers for the question "Would you like to take future online courses?". Due to these two options, there is only a canonical discriminant function being used in the analysis. In this study, the function of both male and female students accounts for 100% discriminating ability of the discriminating variables, in which eigenvalues of the male result is 0.314 with its canonical correlation is 0.489. It helps to explain the 23.9% variance of dependent variables. Figures for females are presented as 0.268, 0.46, and 21.2% correspondingly.

Regarding the Wilk's Lambda of both male and female analyses, figures for males are written with 0.761 and  $p = .000$ , and the ones for females are 0.789 and  $p = .000$ . These help to confirm the statistical significance of these analyses in our context.

**Table 3**

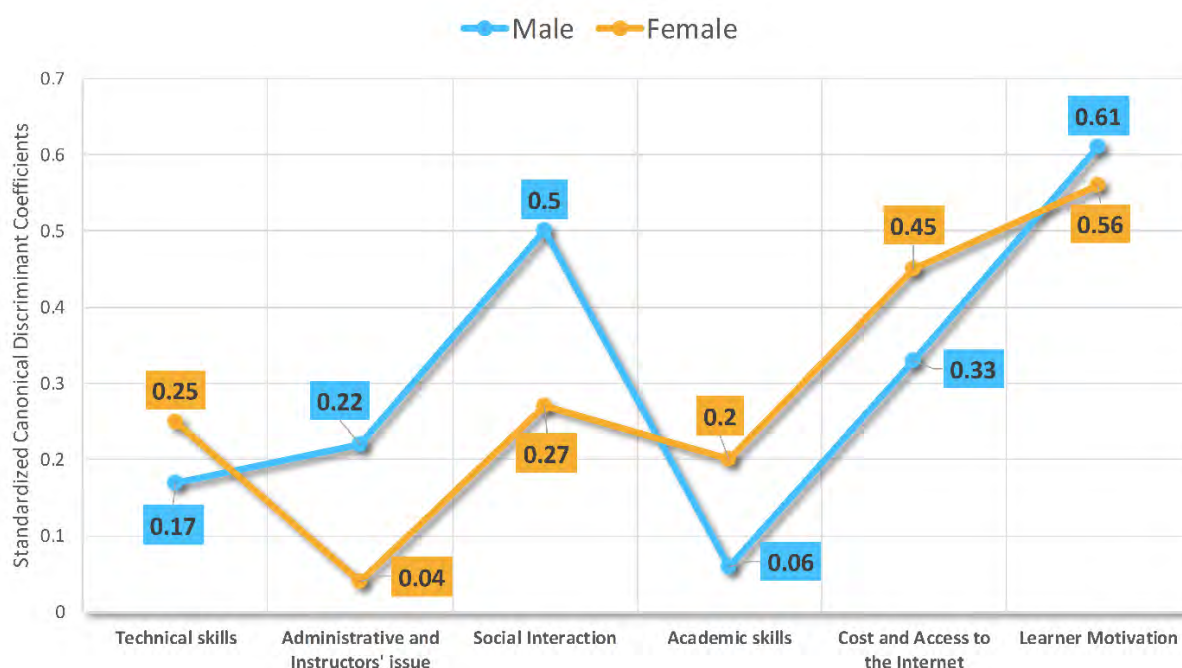
*Frequencies of “Yes” and “No” answers for online learning readiness (N=1118)*

	Yes	No
Male (n=435)	260	175
Female (n=683)	394	298

It in-line with the impacts found in the hindrance factors between male and female learners who are ready to continue studying future online courses and those who are unready. As can be seen from Figure 7, it is obvious to conclude that learner motivation has the most impact on both males’ and females’ decisions, with Discriminant Scores (DS) presented at 0.61 and 0.56, respectively. Following this factor, Social Interaction (DS=0.5) becomes the second influential factor for male students while the counterpart finds it a problem to continue learning online due to Cost and Access to the Internet (DS=0.45), before admitting the impact of Social interaction as the third influential factor (DS=0.27). Having the least impact on causing discrepancies between the two decisions, female students put the influence of Administrative and instructors’ issues to the back of the list of barriers while males’ readiness does not depend really much on Academic Skills (DS=0.06)

**Figure 7**

*Standardized Canonical Discriminant Function Coefficients*



Regarding 435 male participants, 175 students (40.2%) answered “No” for the questions about online readiness; and the other 260 (59.8%) said “Yes”. As a result of Classification tables, it is knowledgeable that:

- Among 175 students who said “No”, 121 of them are predicted unready for future distance courses.
- Among 260 students who said “Yes”, 197 of them are predicted to be ready for future distance courses.

- The percentage of original grouped cases correctly classified is 72.2%.

In terms of female learners, there is a total of 684 participants and 289 “No” answers (42.2%), and 394 “Yes” answers (57.6%).

- Among 289 females who said “No”, 212 of them are predicted to be unready for future distance courses.
- Among 394 females who said “Yes”, 280 of them are predicted to be ready for future distance courses.
- The percentage of original grouped cases correctly classified is 72.0%.

### Gender versus Online Learning Readiness

To examine whether gender has an impact on online learning readiness, Chi-square Tests were run based on statistics of numbers of male and female students and their judges on being ready or unready to take future online courses. Its details being shown in Table 4 revealed that the Asymptotic Significance (2-sided) is 0.491, greater than 0.05, so the null hypothesis was accepted. It means that gender has no influence on EFL students’ online learning readiness.

**Table 4**

*Chi-Square Tests*

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.475 <sup>a</sup>	1	.491
Continuity Correction <sup>b</sup>	.393	1	.531
Likelihood Ratio	.476	1	.490
Fisher's Exact Test			
Linear-by-Linear Association	.475	1	.491
N of Valid Cases	1118		

*a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 180.54.*

### Discussion

Learning online during the COVID-19 pandemic has created a great impetus for students throughout the nation and worldwide to receive a mainstream of education. Learning English online on a large scale at this time, with its own distinguished features, had already received early judgments from their learners. In addition to students’ responses to online learning obstacles on a range of items of Berge’s framework (2005) regarding cost and access to the Internet, technical problems, learner motivation, social interaction, administrative or instructors’ issues, and academic skills; qualitative findings, on the one hand, reveal the impact of economic condition and geographical features as additional barriers; on the other hand, it exposes students’ perception toward their teachers’ teaching techniques. Through the comprehensive reflections of learners both on qualitative and quantitative aspects, it positively provides for the educator an overview about what and how to do to realize online learning in Vietnamese context.

### Gender Discrepancies in Students’ Perception Toward Online Learning Barriers

The findings provided a comparison between males’ and females’ perceptions toward online learning barriers. There are two out of six factors remaining after EFA which propose the discrepancies between the two genders, namely technical problems and cost and access to the

Internet. For these factors, female students tend to perceive more levels of difficulties than males. It can be concluded that females in our circumstances have higher evaluations on the issues related to Internet access, fee, and problems about online learning techniques. A confirmation of McSporran and Young (2001) is in this study with reports on women's disadvantages are present in learning with computers. However, the current study recorded similarities when a lot of men are given the same statements about ICT lack of knowledge as the women. It is a discovery that helps strengthen a balanced attitude between the two genders when learning English online. With regards to the other barriers, namely learner motivation, administrative or instructors' issues, academic skills, and social interaction, there are no discrepancies in perceptions between the two genders. It is quite different from studies of Ashong et al. (2012), which admitted to a higher level of women's positive perceptions on teacher support and student interaction. Yet, it is in agreement with Price (2006) which testified to the effect of "women's access to technology and enrolment on the online version of the course was comparable to men's" (p.353).

With respects to students' comments about a model English online lesson, it can be seen that almost all teachers accidentally performed traditionally when teaching, where students wanted to welcome innovative teaching methods like they were gaining on campus. By pointing out a lot of predictable teaching scenarios, students exposed their expectations in more interesting lessons, where they could acquire language more effectively. For some other students, they felt it was difficult because they were not proficient enough in the four skills comprising listening, reading, speaking, and writing, especially with the typing skill included. They believed learning English online to be much more difficult. These concerns would be a problem that the study helps to reflect and expect solutions from educators who want to motivate online teaching in the home country.

### **Gender Issues and the Readiness of Online English Learning in the Future**

Regarding students' online learning readiness, the results re-confirmed the good promise of online education in Vietnam (Van & Thi, 2021) by the approval of both genders, though there are still remarkable numbers of students being in the opposite spectrum. Both males and females in high school and universities in this study are given the same learning opportunities in learning, and they all face similar challenges as well as gaining benefits. The number of 46 students' claims had contributed to enlightening the future of teaching English online in Vietnam; for instance, 30/67 respondents believed in the necessary of joining online learning as an adaptation to the development technology and society. "It is just the matter of time, as well as the matter of earliness or lateness.", said respondent #889. This is also the reasons why they expose a wide range of difficulties, sometimes with extreme positions. Yet in the end, they still would volunteer for online learning in the future.

### **Gender Equality in Online Learning amidst the COVID-19 Pandemic**

Being completely different from the reality of educational rights of women in Vietnam in the past, the result of the study is the best evidence for the improvement of gender inequality, especially in the context of the COVID-19 outbreak. It erases the images of women whose learning rights were restricted by the effect of Confucianism thousand years ago (Vu & Yamada, 2020), which was testified by the readiness of both males and females students in learning in the disadvantaged conditions with positive ratings and comments when being asked about obstacles while learning English online. Moreover, the result of Chi-square tests leading to a conclusion that gender has no impacts on learners' future decisions, help to shorten the bias suspicion of human about women ability in learning with technology (Blum, 1999;



Bostock et al., 1987; Brosnan & Davidson, 1996; Perry & Greber, 1990; Rosen et al., 1987). It also opens the door for online learning to be enhanced with the support of both genders.

### **Pedagogical Implications**

To deal with the urgent call for online learning in the context of the COVID-19 pandemic, the research contributes to the literature about the readiness of learning English online of students in Vietnam in terms of gender. It helps to provide insights into males and females' attitudes toward accepting online education or not. The reflection of both quantitative and qualitative results toward learning English online becomes extremely important for all stakeholders, especially when promoting online learning and other technology-based learning practices into the region. Additionally, it provides implications for researchers, course providers, and course designers (Lowes et al., 2016), who become extended stakeholders when creating the programs that serve the learning needs of female and male students.

## References

- Allen, I. E., & Seaman, J. (2007). *Online nation: Five years of growth in online learning*. ERIC. <https://files.eric.ed.gov/fulltext/ED529699.pdf>
- Anh, D. K. (2020). *Việt Nam: COVID-19 và thách thức đối với ngành Giáo Dục*. Friedrich Ebert Stiftung. Accessed October 2, 2021 from <https://www.fes-vietnam.org/vi/vn-news-events-publications-detail/viet-nam-COVID-19-va-thach-thuc-doi-voi-nganh-giao-duc/>
- Anh, N. T. L., & Duc, H. M. (2020). *Đào tạo trực tuyến trong các trường đại học ở Việt Nam hiện nay: Thực trạng và giải pháp nâng cao chất lượng*. Cong Thuong Industry and Trade Magazine. Accessed October 2, 2021 from <https://tapchicongthuong.vn/bai-viet/dao-tao-truc-tuyen-trong-cac-truong-dai-hoc-o-viet-nam-hien-nay-thuc-trang-va-giai-phap-nang-cao-chat-luong-75924.htm>
- Ashong, C. Y., Commander, N. E., & Teaching. (2012). Ethnicity, gender, and perceptions of online learning in higher education. *MERLOT Journal of Online Learning*, 8(2).
- Atack, L. (2003). Becoming a web-based learner: Registered nurses' experiences. *Journal of advanced nursing*, 44(3), 289-297. <https://doi.org/10.1046/j.1365-2648.2003.02804.x>
- Barker, A. (2003). Faculty development for teaching online: Educational and technological issues. *The Journal of Continuing Education in Nursing*, 34(6), 273–278. <https://doi.org/10.3928/0022-0124-20031101-10>
- Blum, K. D. (1999). Gender differences in asynchronous learning in higher education: Learning styles, participation barriers and communication patterns. *Journal of asynchronous learning networks (JALN)*, 3(1), 46-66. Accessed October 2, 2021 from <https://pdfs.semanticscholar.org/66c4/7c2b615d95f3e76ade45da1d0bec3899fb5f.pdf>
- Bostock, S. J., Seifert, R. V., & McArdle, J. (1987). The effects of learning environment and gender on the attainment of computer Literacy. *Studies in the Education of Adults*, 19(1), 37-45. <https://doi.org/10.1080/02660830.1987.11730478>
- Brosnan, M. J., & Davidson, M. J. (1996). Psychological Gender Issues in Computing. *Gender, Work & Organization*, 3(1), 13–25. <https://doi.org/10.1111/j.1468-0432.1996.tb00045.x>
- Browne, E. (2005). Structural and pedagogic change in further and higher education: A case study approach. *Journal of Further and Higher Education*, 29(1), 49–59. <https://doi.org/10.1080/03098770500037754>
- Cole, A., Conlon, T., Jackson, S., & Welch, D. (1994). Information technology and gender: Problems and Proposals. *Gender and Education*, 6(1), 77–86. <https://doi.org/10.1080/0954025940060106>
- Dabbagh, N., & Bannan-Ritland, B. (2005). *Online learning: Concepts, strategies, and application*. Upper Saddle River, New Jersey: Pearson Merrill Prentice Hall.
- Dyrbye, L., Cumyn, A., Day, H., & Heflin, M. (2009). A qualitative study of physicians' experiences with online learning in a masters degree program: Benefits, challenges, and proposed solutions. *Medical Teacher*, 31(2), e40-e46. <https://doi.org/10.1080/01421590802366129>

- Fish, L. A. (2016). A Preliminary Study of Changes in Online Graduate Business Student Perceptions Over a Course. *Business Education Innovation Journal*, 8(2), 41–50. Accessed October 2, 2021 from [http://www.beijournal.com/images/V8N2\\_85.pdf](http://www.beijournal.com/images/V8N2_85.pdf)
- Garland, M. R. (1993). Student perceptions of the situational, institutional, dispositional and epistemological barriers to persistence. *Distance Education*, 14(2), 181–198. <https://doi.org/10.1080/0158791930140203>
- Grundy, A. F., & Grundy, J. (1996). *Women and computers*. Intellect Books, Exeter.
- Ha, C. (2020). 92 Universities Applying Online Learning. VTC News. Accessed October 2, 2021 from <https://vtc.vn/92-truong-dai-hoc-ap-dung-hinh-thuc-day-truc-tuyen-ar535639.html>
- Horspool, A., & Lange, C. (2012). Applying the scholarship of teaching and learning: Student perceptions, behaviours and success online and face-to-face. *Assessment & Evaluation in Higher Education*, 37(1), 73–88. <https://doi.org/10.1080/02602938.2010.496532>
- Hrastinski, S. (2008). Asynchronous and synchronous e-learning. *Educause Quarterly*, 31(4), 51–55.
- Hurmerinta-Peltomäki, L., & Nummela, N. (2006). Mixed methods in international business research: A value-added perspective. *Management International Review*, 46(4), 439–459. <https://doi.org/https://doi.org/10.1007/s11575-006-0100-z>
- Kokko, T., Pesonen, H., Kontu, E., & Pirttimaa, R. (2015). Why study online in upper secondary school? Qualitative analysis of online learning experiences. *Human Technology: An Interdisciplinary Journal on Humans in ICT Environments*, 11(1), 57–70. <https://doi.org/10.17011/ht/urn.201505061740>
- Landrum, B., Bannister, J., Garza, G., & Rhame, S. (2020). A class of one: Students' satisfaction with online learning. *Journal of Education for Business*, 96(2), 82–88. <https://doi.org/10.1080/08832323.2020.1757592>
- Lowes, S., Lin, P., & Kinghorn, B. R. (2016). Gender differences in online high school courses. *Online Learning*, 20(4), 100–117. <https://doi.org/10.24059/olj.v20i4.1049>
- McSporran, M., & Young, S. (2001). Does gender matter in online learning? *ALT-J*, 9(2), 3–15. <https://doi.org/10.1080/0968776010090202>
- Muilenburg, L., & Berge, Z. L. (2001). Barriers to distance education: A factor-analytic study. *American Journal of Distance Education*, 15(2), 7–22. <https://doi.org/10.1080/08923640109527081>
- Muilenburg, L. Y., & Berge, Z. L. (2005). Student barriers to online learning: A factor analytic study. *Distance Education*, 26(1), 29–48. <https://doi.org/10.1080/01587910500081269>
- Mullen, G. E., & Tallent-Runnels, M. K. (2006). Student outcomes and perceptions of instructors' demands and support in online and traditional classrooms. *The Internet and Higher Education*, 9(4), 257–266. <https://doi.org/https://doi.org/10.1016/j.iheduc.2006.08.005>
- Newby, T., Stepich, D., Lehman, J., & Russell, J. (2000). *Instructional technology for teaching and learning: Designing instruction, integrating computers, and using media* (2nd ed.). Upper Saddle River, New Jersey: Merrill.

- Nha, P. X. (2020). *Minister of Education and Training Phung Xuan Nha requests UNICEF's support in distance learning*. UNICEF (VietNam). Accessed October 2, 2021 from <https://www.unicef.org/vietnam/stories/minister-education-and-training-phung-xuan-nha-requests-unicefs-support-distance-learning>
- Nunnally, J. C., & Bernstein, C. (2007). *IH (1994). Psychometric theory* (3rd ed.). New York : McGraw-Hill, c1994. Accessed October 2, 2021 from <https://lib.ugent.be/catalog/rug01:000331515>
- O'Cathain, A., Murphy, E., & Nicholl, J. (2010). Three techniques for integrating data in mixed methods studies. *Bmj*, 341, c4587. <https://doi.org/10.1136/bmj.c4587>
- Perry, R., & Greber, L. (1990). Women and computers: An introduction. *Signs: Journal of women in Culture and Society*, 16(1), 74–101. <https://doi.org/10.1086/494646>
- Platt, C. A., Raile, A., & Yu, N. (2014). Virtually the same? Student perceptions of the equivalence of online classes vs. face-to-face classes. *Journal of Online Learning and Teaching*, 10(3), 489–503. Retrieved on Oct 2, 2021 from [https://www.researchgate.net/publication/271205198\\_Virtually\\_the\\_same\\_Student\\_perceptions\\_of\\_the\\_equivalence\\_of\\_online\\_classes\\_vs\\_face-to-face\\_classes](https://www.researchgate.net/publication/271205198_Virtually_the_same_Student_perceptions_of_the_equivalence_of_online_classes_vs_face-to-face_classes)
- Price, L. (2006). Gender differences and similarities in online courses: challenging stereotypical views of women. 22(5), 349–359. <https://doi.org/https://doi.org/10.1111/j.1365-2729.2006.00181.x>
- Rosen, L. D., Sears, D. C., & Weil, M. M. (1987). Computerphobia. *Behavior Research Methods, Instruments, & Computers*, 19(2), 167–179. <https://doi.org/10.3758/BF03203781>
- Rosenlee, L. H. L. (2006). *Confucianism and Women: A Philosophical Interpretation*. SUNY Press. Retrieved on Oct 2, 2021 from <https://books.google.com.vn/books?id=W-V0nQEACAAJ>
- Sargeant, J., Curran, V., Jarvis-Selinger, S., Ferrier, S., Allen, M., Kirby, F., & Ho, K. (2004). Interactive on-line continuing medical education: Physicians' perceptions and experiences. *Journal of Continuing Education in the Health Professions*, 24(4), 227–236. <https://doi.org/10.1002/chp.1340240406>
- Schilke, R. A. (2001). *A case study of attrition in web-based instruction for adults: Updating Garland's model of barriers to persistence in distance education*. Northern Illinois University.
- Smart, K. L., & Cappel, J. J. (2006). Students' perceptions of online learning: A comparative study. *Journal of Information Technology Education: Research*, 5(1), 201-219. <https://doi.org/10.2139/ssrn.3524610>
- Spender, D. (1997). The position of women in Information Technology-or who got there first and with what consequences? *Current Sociology*, 45(2), 135–147. <https://doi.org/10.1177/001139297045002008>
- Toshiyuki, M. (2020). *Dịch COVID-19 ảnh hưởng đến gần 1,6 tỉ người học*. Tuoitreonline. Retrieved on Oct 2, 2021 from <https://tuoitre.vn/the-gioi-nhu-toi-thay-ky-2-dich-COVID-19-anh-huong-den-gan-1-6-ti-nguoi-hoc-20200827094736097.htm>
- Urdan, T. A., & Weggen, C. C. (2000). *Corporate E-learning: Exploring a New Frontier*. W.R. Hambrecht.

- Van, D. T. H., & Thi, H. H. Q. (2021). Student barriers to prospects of online learning in Vietnam in the context of Covid-19 Pandemic. *Turkish Online Journal of Distance Education*, 22(3), 110–123. <https://doi.org/10.17718/tojde.961824>
- Vu, T. M., & Yamada, H. (2020). The legacy of Confucianism in gender inequality in Vietnam. *MPRA Paper 101487*, University Library of Munich, Germany. Retrieved October 2, 2021 from <https://mpra.ub.uni-muenchen.de/id/eprint/101487>
- Wyatt, G. (2005). Satisfaction, academic rigor and interaction: Perceptions of online instruction. *Education (Chula Vista)*, 125(3), 460–468.

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## **Do Cognitive Dispositions and Gender Matter in Applications of Culturally Relevant Pedagogy? A Pilot Study at an Iraqi University**

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### Abstract

The present pilot study examines the extent to which particular individual differences (i.e., general self-efficacy, goal orientation, and decision-making styles) may shape academic success in courses conforming to the principles of Culturally Relevant Pedagogy (*CRP*). End-of-semester course grades were used as a coarse, institutionally mandated measure of academic success. Gender differences were observed. For female students, a learning orientation was related to academic success. However, female students' academic success was also related to their reliance on specific decision-making styles (i.e., vigilance and hyper-vigilance). Male students' academic success was not significantly related to any of the individual difference measures. These findings suggest that applications of *CRP* may benefit from the recognition of students' preexisting dispositions and that such dispositions may differ between sexes. A discussion follows regarding how information regarding students' preexisting differences may benefit *CRP* instruction.

*Keywords:* academic success, culturally relevant pedagogy, cognitive dispositions, higher education



Instruction is situational. Its effectiveness is shaped by the interplay between instructor and students (Farias et al., 2010). In the present study, we ask whether particular students' dispositions are related to institutionally mandated performance measures (i.e., end-of-semester class grades) when the instruction in a college course conforms to the principles of *Culturally Relevant Pedagogy (CRP)*.

*CRP* is an instructional practice whose overreaching aim is to enable learners to become informed and engaged intellectually, emotionally, socially, and politically. It rests on three key objectives for all learners, which are (a) academic success, (b) cultural competence, and (c) and sociopolitical consciousness, each supported by *CRP*'s reliance on the nurturing of critical analysis skills. Academic success refers to the "intellectual growth that students experience as a result of classroom instruction and learning experiences" (Ladson-Billings, 2014, p. 75). More practically, it is what "students know and can do as a result of pedagogical interactions with skilled teachers" (Ladson-Billings, 2006, p. 34). *CRP* relies on the belief that all learners are capable of academic success if adequate opportunities and tools are given, high expectations are set, and students take responsibility for their learning. Cultural competence entails learning that acknowledges and honors students' values, experiences, and sense of self (Howard, 2003) and, by doing so, promotes awareness of cultural diversity. Sociopolitical consciousness specifically reflects the use of critical thinking skills to examine, deconstruct, and evaluate existing societal systems and the knowledge upon which they rely, with the prospect of contributing to the development of alternative theoretical constructs and tools.

In essence, *CRP* does not merely rest on good intentions, but on instructors who translate intentions into actions, and who are aware of how their identity, life experience, knowledge, and institutional role may limit and bias their instruction as well as impact teaching and learning in their courses (Brown-Jeffy & Cooper, 2011). It also relies heavily on active learning, which entails instructional methods that engage students in the learning process. In short, *CRP* requires learners to do meaningful activities and reflect on what they are doing. For example, Lee (2006) suggests the development of instruction that links students' everyday knowledge (including cultural scripts and experiences) to traditional academic subject matters. Her work specifically focuses on teaching strategies for literary analysis that rely on students' cultural frames of reference so that students can easily transfer the acquired skills to unfamiliar texts. Similarly, Camp & Oesterreich (2010) report on the value of drawing on life experiences of injustice as a means to promote and practice inquiry-based learning among one's students.

Although it is a challenging proposition to implement, *CRP* is believed to be an effective pedagogy for facilitating learning inside and outside the classroom, providing students with diverse opportunities to acquire and demonstrate knowledge, helping students to appreciate their culture in relation to dominant cultural frames, and enhancing engagement and classroom management (Howard & Rodriguez-Scheel, 2017; Pilotti & Al Mubarak, 2021; Siwatu, 2007; Walker, 2019). *CRP* has attracted strong advocates among instructors who are looking for alternatives to traditional teaching methods, while skeptical instructors regard *CRP* as just another educational fad (Royal & Gibson, 2017). However, most of the research on the effectiveness of *CRP* tends to rely on interviews and observations, and to focus on the logistics and challenges of the implementation of such pedagogy, thereby resulting in largely descriptive studies (Morrison et al., 2008; Young, 2010) where instructors' experiences take the spotlight. Action research methodologies have had limited use at best (Lee, 1998; Pilotti & Al Mubarak, 2021; Sheets, 1995).

Although the effectiveness of *CRP* is intended to be measured through the lenses of its three objectives (i.e., academic success, cultural competence, and sociopolitical consciousness), students' academic success is generally the objective that takes the center stage for both detractors and proponents of *CRP* (Royal & Gibson, 2017; Schmeichel, 2012). In the current educational environment, academic decision-making practices are largely structured around grades (Kohn, 1993), which epitomize easily accessible, and widespread measures of performance. Grades are used as scorecards of students' abilities and knowledge that can qualify or disqualify them as holders of a degree, a scholarship, financial aid, and so on. Namely, irrespective of the broad definition that *CRP* gives to academic success, grades still matter as performance indices of the extent to which students have achieved the predefined standards mandated by the institution of higher learning in which they are enrolled. Thus, it is not unlikely for research on *CRP* to rely on grades as coarse measures of academic success (Dee & Penner, 2017; Gao, 2014; Parker & Rosenthal, 2011). Yet, the extent to which the effectiveness of *CRP* (as narrowly measured by grades) is modulated by specific students' cognitive dispositions remains unclear, especially among students from historically marginalized communities. Preexisting differences (if related to performance) may facilitate or weaken the application of *CRP* to a college course. As such, an educator's awareness of students' cognitive dispositions and their relevance to academic success can inform his/her teaching and dictate remedial adjustments. In the case study described below, we examine three kinds of cognitive dispositions: self-efficacy, goal orientation, and decision-making styles. The rationale for their selection is their purported relationship with academic performance as measured by grades.

Self-efficacy is generally defined as an individual's level of confidence in his/her ability to execute actions or attain particular performance outcomes (Bandura, 1977; Bandura & Schunk, 1981). Self-efficacy is born of prior experiences of success and is assumed to influence the initiation of intentional actions, the amount of effort applied to attain desired outcomes, and the persistence with which actions are performed in the face of challenges and obstacles (Bandura, 1977; Pajares, 1996). Its relationship with performance has been reported to be either positive (Bouffard-Bouchard, 1990; Lane & Lane, 2001) or negative (Vancouver et al., 2002), depending on whether it fosters effort and persistence or over-confidence (Moores & Chang, 2009).

The term *goal orientation* refers to the ways students may approach a course in which they are enrolled and its demands. The course may be seen as an opportunity to acquire knowledge and skills (i.e., learning or mastery orientation) or as an opportunity to acquire a good grade that bolsters students' GPA, which is judged as a valid reason, in and of itself, for enrolling in the course (i.e., grade or performance orientation). Evidence regarding the relationship between goal orientation and academic performance is mixed. Studies have reported a positive relationship with learning orientation (Coutinho, 2007; D'Lima et al., 2014; Eison, 1982; Schraw et al., 1995; VandeWalle et al., 2001), and a negative relationship with grade orientation (Beck et al., 1991), but mixed or contradictory findings have also surfaced (Beck et al., 1991; Elliot & Church, 1997; Harju & Eppler, 1997; Harris & Harris, 1987; Page & Alexitch, 2003).

Decision-making styles are patterns used to make decisions, usually under conditions of uncertainty (Janis & Mann, 1977). According to Mann et al. (1997), they include vigilance, hyper-vigilance, buck-passing, and procrastination. Vigilance reflects a disposition to gather all relevant information, as well as examine and evaluate the available alternatives carefully and without prejudice before making a choice. Vigilance is considered ideal for generating

sound and rational decisions. Hyper-vigilance refers to a disposition to choose a course of action frantically and hastily without considering all information available about options and their likely consequences. Defensive avoidance, which involves trying to escape the perceived burden of choosing something over something else, characterizes the remaining types. It may entail either procrastinating or transferring the responsibility for making decisions to someone else (i.e., buck-passing). Studies have reported performance to be positively related to vigilance (Kornilova et al., 2018) and negatively related to procrastination (Sagone & Indiana, 2021; Steel, 2007), but its relationship with the other decision-making styles remains undetermined.

Too often, the evidence concerning the relationship between learners' performance and dispositional differences does not situate such differences within any particular instructional model. In *CRP*-related research, a few exceptions exist though, but they are limited to addressing some particular objective or aspect of *CRP*. For instance, Ballen et al. (2017) reported that self-efficacy accounted for performance gains in the context of instruction encouraging active learning, which is a key aspect of *CRP*. Folk (2018) found that students who exhibited a learning orientation were the only students who displayed critical, analytical, and reflective modes of thinking, which represent the cornerstone of academic success for *CRP*. Evidence may also illustrate the undesirable outcomes of instructional approaches that negate core principles of *CRP*. For example, Taggart (2017) found that cultural discontinuity, which *CRP* opposes, was inversely related to students' grade point average (GPA). Cultural discontinuity is "a school-based behavioral process where the cultural value-based learning preferences and practices of many ethnic minority students—those typically originating from home or parental socialization activities—are discontinued at school" (Tyler et al., 2008, p. 281).

In light of the scant evidence regarding the role of cognitive dispositions in applications of *CRP*, it is reasonable to ask whether there is indeed a relationship between particular cognitive dispositions and performance (as measured by class grades) in *CRP*-compliant courses. Hypotheses may be informed by the extent to which cognitive dispositions are assumed to match the principles that define and structure *CRP* instruction in the classroom. For instance, based on the notion that *CRP* is a pedagogy of empowerment and engagement (Ladson-Billings, 1994), it is reasonable to expect that, in *CRP*-compliant courses, class grades would be positively related to self-efficacy as well as learning orientation. Because *CRP* emphasizes learners' strengths in critical thinking, offers students intellectual challenges within a cooperative and supportive learning environment that minimizes stress and anxiety, it is also reasonable to expect that class grades would be positively related to vigilance, but negatively related to hypervigilance and defensive avoidance modes.

To offer an adequate test of *CRP*, the present pilot study targets college students of the Kurdistan Region of Iraq, who are an under-represented population in educational research. Their society is shaped by patriarchal and collectivistic values defined along ethnic and religious lines. In such a society, gender is an unavoidably relevant demographic dimension, even among young college students. Across Iraq, including the Kurdistan region, access to university education by women has steadily improved (Al-Ali, 2008; Masika et al., 2014). Structural barriers, however, are embedded in cultural practices that define gender roles, thereby continuing to curtail women's educational and professional opportunities (Metcalf 2008; Soltanpanah et al., 2018). Thus, the present pilot study also examines whether gender differences exist in the relationship between particular cognitive dispositions of students who are enrolled in *CRP*-compliant courses and class grades. The scant extant evidence does not provide clear guidance as to how the position of dominance given to males in Iraqi society

might shape self-efficacy, goal orientation, and decision-making styles. Evidence from the Kurdistan Region exists though that test anxiety is higher in female students than male students (Faqe et al., 2016), leading to the prediction that females might display lower self-efficacy than males, adopt a performance orientation according to which grades are paramount, and rely more often on hyper-vigilance styles in decision making. Whether purported cognitive differences in dispositions might relate differently to the academic performance of females and males is a matter to be investigated.

In sum, the present study is guided by two key interrelated questions: What are the dispositions that characterize this sample of female and male students (e.g., general self-efficacy, goal orientation, and decision-making styles)? Do individual differences in the selected dimensions contribute to female and male students' class performance (as measured by end-of-semester grades) differently?

## **Method**

### **Sample**

The sample consisted of 166 students (104 males and 62 females) enrolled in one of three undergraduate courses (History of the Modern World, Comparative Political Systems, and International Relations) offered by a university in the Kurdistan Region of Iraq. The university relies on a US curriculum and requires instructors to follow a student-centered approach to instruction. The uneven number of males and females reflects the university's enrollment rates, thereby underscoring the barriers that women encounter in entering higher education within a patriarchal system that favors men for intellectual and professional pursuits. Participation complied with the guidelines of the Office for Human Research Protections of the U.S. Department of Health and Human Services and with the American Psychological Association's ethical standards in the treatment of research participants. Twenty-four additional students were excluded for early withdrawal or for failing to complete one or more of the surveys upon which the study relied.

### **Procedure and Materials**

The present pilot study was conducted in the field. As a result, the participants were students enrolled in actual courses. Students qualified for participation by virtue of being enrolled in one of the courses selected for the study. They were assessed on actual tests and homework assignments, thereby making performance assessment relevant to them. Within the timeframe of a semester, students completed the assignments and tests on which class grades, used as indices of academic performance, were based. No student in the sample was enrolled in more than one of the selected classes. Convenience sampling was used to select 3 courses taught by the same 2 instructors: History of the Modern World (5 sections), Comparative Political Systems (1 section), and International Relations (1 section). Courses were selected to include students from across the university (History of the Modern World) as well as to ensure adequate representation of the political science major, one of the main constituents of the curriculum of the university (Comparative Political Systems and International Relations). The curriculum of each course was intended to emphasize the acquisition and practice of basic academic skills (e.g., writing, speaking, reasoning, etc.) within a specific domain of knowledge, and the acquisition of knowledge within that domain. Course selection also ensured uniformity of the measurement of performance across the entire semester. Each course consisted of a midterm and a final test as well as an assignment before and an assignment after the midterm. Test questions and assignments embraced all of the six types of information acquisition and processing highlighted by Bloom's taxonomy of human thinking (Anderson & Krathwohl,

2001; Bloom, 1956, 1976; Krathwohl, 2002). Namely, assessment required remembering, understanding, application, analysis, evaluation, and synthesis/creation of work. In addition to content, these courses were selected for their adequate enrollment, the consent of the instructors, the adoption of *CRP* instruction, and the unlikely overlap of students.

The instructors were recognized by their colleagues and students as thoughtful, student-centered educators of Middle Eastern descent. Peer observations and evaluations qualified them as learning-oriented educators (Farias et al., 2010) whose instruction was *CRP*-compliant. That is to say, the instructors were described as emphasizing collaboration and mutual support among students, offering plentiful developmental feedback, setting high standards, making an effort to include in their instruction local knowledge and facts, and using grades as opportunities to further learning. Their responses to the *LOGO F* scale of Eison et al. (1993) supported peer observations and evaluations. The scale assessed their attitudes towards grade and learning on a 5-point Likert scale from strongly disagree (1) to strongly agree (5), as well as their behaviors towards learning and grades on a five-point scale from never (1) to always (5). Instructors reported engaging in behaviors consistent with a learning orientation more often than behaviors consistent with a grade orientation. Similarly, they advocated more strongly learning-oriented attitudes than grade-oriented ones.

After students had the opportunity to acclimate to the course in which they enrolled and to understand its requirements, they were asked to complete three questionnaires as part of a self-assessment protocol: The New General Self-Efficacy (*NGSE*) questionnaire (Chen et al., 2001; Chen et al., 2000), the attitude portion of the *LOGO II* questionnaire (Eison & Pollio, 1985; 1989; Eison et al. 1983) and the Melbourne Decision-Making (*DM*) questionnaire (Mann et al., 1997; see Appendix A). Students were assured that the data from the questionnaires would be used to understand learning and teaching in the class and that their responses would remain confidential.

The *NGSE* questionnaire was used to measure students' general confidence in their ability to deal with a broad range of challenges (Bandura, 1989). For each of the eight statements of confidence that the questionnaire contained, students indicated the extent of their agreement or disagreement on a scale from strongly disagree (1) to strongly agree (5) with 3 serving as the neutral point (Cronbach's Alpha = .82). The attitude portion of the *LOGO II* questionnaire comprised 8 statements expressing a learning orientation and 8 statements expressing a grade orientation to be rated on a 5-point Likert-type scale from "strongly agree" (4) to "strongly disagree" (0) with the neutral point set at 2 (Cronbach's Alpha = .76; Eison et al., 1983). The Melbourne Decision-Making questionnaire was intended to measure decision-making styles, including vigilance (6 items), hyper-vigilance (5 items), procrastination (5 items), and buck-passing (6 items). In the questionnaire, each item described a particular way people approach decision making. Students were asked to indicate the extent to which each statement applied to them on a 3-point Likert-type scale, including "true for me" (2), "sometimes true" (1), and "not true for me" (0; Cronbach's Alpha = .81).

## Results

The analyses described in this section answer two key interrelated questions: What are the dispositions that characterize this sample of female and male students (e.g., general self-efficacy, goal orientation, and decision-making styles)? Do individual differences in the selected dimensions contribute to female and male students' class performance (as measured

by end-of-semester grades) differently? All the results of inferential statistics discussed below are considered significant at the .05 level.

### Assessment of Individual Differences

Students' ratings of the 8 items of the *NGSE* scale were averaged. The mean was treated as an index of general self-efficacy. Students' ratings of the items of the *LOGO II* scale endorsing grades were subtracted from those endorsing learning to create a preference score. Thus, a positive (+) score signified a preference for learning whereas a negative (-) score signified a preference for grades. A zero indicated no inclination for either orientation. Students' ratings of the *DM* questionnaire were organized into clusters illustrating four distinct styles (as per Mann et al., 1997): vigilance, hyper-vigilance, procrastination, and buck-passing. Each style was the average of the students' ratings of the items that pertained to it. Descriptive statistics are displayed in Table 1.

**Table 1**

*Mean and Standard Error of the Mean (SEM) of Class Performance and Ratings of Self-Efficacy, Goal Orientation, and Decision-Making Styles*

	Female Mean	SEM	Male Mean	SEM	Mean
<i>Performance</i> (potential range: 0-100)	72.85	2.087	74.88	1.363	74.12
<i>Self-Efficacy</i> (potential range: 1-5)	2.01	0.068	1.98	0.051	1.99
<i>Goal Orientation</i> (potential range: 0-4)					
Preference for Learning	0.35	0.091	0.40	0.068	0.38
<i>Decision-Making</i> (potential range: 0-2)					
Vigilance	1.65	0.041	1.66	0.033	1.66
Hyper-vigilance	1.15	0.050	1.03	0.039	1.09
Procrastination	0.84	0.062	0.75	0.046	0.78
Buck-Passing	0.63	0.065	0.69	0.046	0.66

Separate one-way ANOVAs were performed on end-of-semester class grades (serving as a measure of academic success), self-efficacy beliefs, and learning preferences with gender as the independent variable to determine the presence or absence of gender differences in the sample of participants. The type of undergraduate course was not included in the analyses as a variable because it failed to differentiate students.

Female and male students did not differ in academic success,  $F < 1$ , *ns*. End-of-semester class grades were distributed almost evenly across all performance levels: A (i.e., 90-100) = 15.67%, B (i.e., 80-89) = 25.30%, C (i.e., 70-79) = 22.89%, D (i.e., 60-69) = 21.08%, and F (i.e., below 60) = 15.06%. There were no gender differences in self-efficacy beliefs,  $F < 1$ , *ns*. Important to note is that 97.59% of the self-efficacy ratings were below or equal to the neutral point of 3, suggesting that students' self-efficacy beliefs were low overall. There were also no gender differences in preference for learning,  $F < 1$ , *ns*. Interestingly, 66.87% of the students expressed a preference for learning over grades, 25.90% expressed the opposite preference, and 7.23% had no preference at all.

A 4 (decision-making style) X 2 (gender) mixed factorial ANOVA was conducted on the ratings of the *DM* questionnaire. A main effect of decision-making style was observed,  $F(3, 492) = 232.13$ ,  $MSE = .130$ ,  $p < .001$ ,  $\eta p^2 = .586$ , but without a main effect of gender or a significant interaction,  $F_s \leq 1.96$ , *ns*. Pair-wise comparisons, adjusted for experiment-wise alpha through the Bonferroni correction, illustrated the extent of students' reliance on decision-making styles. Overall, vigilance was the most likely used style,  $t_s \geq 14.45$ ,  $p < .001$ . Hyper-vigilance was favored over buck-passing and procrastination, and buck-passing was the least used style,  $t_s \geq 3.24$ ,  $p \leq .001$ .

### Assessment of the Contribution of Individual Differences to Performance

Linear regression analyses were conducted between end-of-semester class grades as the outcome variable and individual difference measures to understand the extent to which each measure made an independent contribution to female and male students' grades. Table 2 illustrates the results of these analyses. For female students, class performance increased with the endorsement of a learning orientation over a grade orientation, and with the adoption of vigilance and hyper-vigilance as decision-making styles. For male students, class performance was not significantly related to any cognitive dimension.

**Table 2**

*Linear Regression Analyses Between Performance and Self-Efficacy, Preference for Learning, and Decision-Making Styles*

	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t</i>	<i>Sign.</i>
<i>Female Students</i>					
Constant	20.765	15.921			
Self-Efficacy	6.003	4.353	.197	1.379	<i>ns</i>
Preference for Learning *	7.040	2.806	.308	2.509	.015
Vigilance *	15.267	6.483	.299	2.355	.022
Hyper-Vigilance *	13.265	6.279	.315	2.112	.039
Procrastination	-1.443	5.164	-.043	-.280	<i>ns</i>
Buck-Passing	-2.585	5.199	-.080	-.497	<i>ns</i>
<i>Male Students</i>					
Constant	63.337	9.526			
Self-Efficacy	1.607	2.803	.060	.573	<i>ns</i>
Preference for Learning	2.632	2.191	.131	1.201	<i>ns</i>
Vigilance	3.530	4.379	.086	.806	<i>ns</i>
Hyper-Vigilance	2.517	4.393	.071	.573	<i>ns</i>
Procrastination	-7.259	3.797	-.246	-1.912	<i>ns</i>
Buck-Passing	6.270	3.492	.211	1.796	<i>ns</i>

### Discussion

The findings of the current study can be summarized in three main points. First, there were no gender differences in the selected cognitive dimensions and academic success (as measured by end-of-semester class grades). Most students exhibited overall low self-efficacy beliefs and a preference for learning. Students also expressed a preference for a vigilant decision-making style over the other styles, suggesting the use of a practice that *CRP* nurtures. Yet, other less ideal decision-making practices were not entirely discounted.

Second, there were gender differences in the contribution of cognitive dimensions to academic success. Females' performance benefited from a learning orientation and the adoption of vigilance and hyper-vigilance in making decisions. Earlier studies had also reported a positive relationship between academic performance and vigilance (Kornilova et al., 2018), as well as academic performance and learning orientation (Coutinho, 2007; D'Lima et al., 2014; Eison, 1982; Schraw et al., 1995; VandeWalle et al., 2001). However, the positive relationship between academic success and hyper-vigilance was unexpected since this type of decision-making style is thought to embody a disposition to choose a course of action frantically and hastily without considering all information available, thereby potentially disrupting performance (Filippello, 2013; Pilotti, 2021). Yet, it is important to note that the female students of our sample have faced trauma and hardship arising from war, ethnic conflict, and traditional gender-role stereotypes, whose toll adds to the multiple demanding, and often conflicting obligations in their quotidian life (i.e., attending to their studies, families' household needs and business, etc.). Thus, hyper-vigilance may become an unavoidable way to approach daily obligations, an approach that mirrors a multi-tasking skill under time constraints. In this regard, Johnston et al. (1997) has argued that hyper-vigilance is an adaptive decision-making strategy in many real-life demanding situations that do not offer decision-makers the luxury of implementing the more elaborate and time-consuming analytical practices characteristic of vigilance. Under such conditions, it is an adaptive strategy that reflects an attempt by decision-makers to preserve effective performance as well as to moderate effort (Payne et al., 1992).

Interestingly, although males displayed a pattern somewhat similar to that of females, no significant contribution of any of the selected cognitive dimensions was obtained. The more opaque predictors of males' academic success may be accounted for by their limited willingness to share their attitudes in a culture where men are expected to be in control.

Third, only 63.86% received a C grade or higher. In higher education, academic success is ordinarily expressed as A, B, or C grades, while D and F grades are interpreted as indices of failing since they are below the minimum grade point average (the equivalent of a C grade) required for graduation. Thus, if the institutionally mandated cumulative index of academic success (i.e., end-of-semester class grades) is considered, *CRP* failed to promote the performance of 36.14% of the enrollees. However, the broader impact of *CRP* on students' learning might not have been captured by this index, as time constraints due to family and work obligations might be the primary culprit of unsuccessful performance. Its broader impact was reflected in students' evaluations at the end of the semester, which illustrated an overall and consistent appreciation for the mode and content of the instruction received. In their evaluations, students considered several criteria, including engagement, learning, and instruction (e.g., content coverage, organization, guidance, assessment, and human rapport). Both personalized comments and ratings, by and large, reflected students' confidence in the quality of the learning acquired. Increased interest in the subject matter they studied was also reported. Most students admitted to having been challenged by the course materials and the depth of the assessment protocols implemented. Yet, students recognized the high standards set by the course in which they were enrolled and expressed the belief that effort was key in meeting these standards and overcome the challenges that they might present. Some noted that challenges were not perceived as impossibilities, but rather as obstacles to overcome or novel problems to solve because support was deemed to be available from the instructor and classmates. Students' largely positive evaluations could be interpreted as the byproduct of the constructive and collaborative interpersonal atmosphere created by the instructors' reliance on *CRP*. Because evaluations were anonymous, their link to performance remained unassessed.



## Recommendations

Although the uncovered pattern of contributions to performance may not generalize to other under-represented student populations, they contain two key messages for instructors who rely on *CRPs* or who may consider the adoption of *CRP*: (a) Applications of *CRP*, albeit well-executed, do not entail academic success (as measured by grades) for all students, especially when most of them possess low self-efficacy. Failures, although painful, can be powerful motivators for both educators and students to initiate a critical self-examination of the instruction that was available inside and outside the classroom to determine the sources of any mismatch between course demands and students' performance. A review of students' academic history and focus groups with selected students can offer valuable information to educators. Corrective actions can then be undertaken in future offerings of a course to target students at risk. For instance, among the remedial actions contemplated for the sample of participants of our pilot study, more flexible time constraints for course completion would need to be considered. (b) Knowing students' cognitive dispositions at the early stages of a course can, to a certain extent, inform teaching. For instance, awareness of a student's low self-efficacy allows instructors to structure their feedback by emphasizing the things that the student has accomplished while highlighting remedies for the things that he/she has not accomplished. The latter includes assuring the student that he/she is capable of reaching the expected standards and that capability is indeed malleable and subject to improvement through effortful action (Cohen et al., 1999). Bandura (1997) noted that one's self-efficacy beliefs are developed from four sources, each one a potential target of intervention: mastery experiences (i.e., experiences of successful performance), vicarious experiences (i.e., the observation of examples of the successful completion of a task, such as a test or an assignment), social persuasions (i.e., feedback, including judgment and appraisal from instructors or other significant others), and emotional arousal (i.e., emotions and physical sensations experienced during task completion). Similarly, knowledge of a student's orientation prioritizing grades over learning can be addressed by instructors at the start of the semester and reinforced with additional feedback focused on providing detailed and helpful comments. Feedback is intended to clarify what to improve and how to do it, must contain a reminder of the high standards to be reached, as well as the assurance that the student is fully capable of achieving them (Anding, 2005). Lastly, decision-making training may be considered for students at risk of academic failure under the assumption that optimal decision-making habits can be taught (Baron & Brown, 2012). Yet, it is necessary to recognize that although vigilance is a desirable strategy, hyper-vigilance is not symptomatic of a general breakdown in performance. Instead, it may be viewed by students as an adaptive response to the challenging demands of college life. Thus, understanding when and where hyper-vigilance instead of vigilance is used may offer useful insights into the features of the academic conditions that trigger it (Ding et al., 2020), which educators can utilize to introduce changes to class activities meant to reduce stress and anxiety.

## Conclusion

*CRP* offers instructors and students opportunities to make teaching and learning meaningful, empowering, and engaging (Gay, 2018). Although a compelling case can be made for the importance of *CRP* as a way to rethink instruction to improve the educational performance of diverse student populations, gaps in educational outcomes of underserved populations remain (Howard & Rodriguez-Scheel, 2017). Furthermore, there may be limitations to applications of *CRP* (e.g., to what extent individual dispositions shape the effectiveness of *CRP*?), which need to be recognized and addressed through action research. The latter is a disciplined process of

inquiry conducted by instructors who desire to improve and/or refine their instructional actions (Manfra, 2019). Our study demonstrates that attention to individual differences, involving cognitive and demographic variables, may be a fruitful area of inquiry for action research. Although institutions of higher learning are faced with larger systemic challenges arising from the socio-political context in which they exist (O'Connor, 2020), the classroom is an excellent place to start restructuring academia to ensure an equitable and sustainable education for all (Focht & Bell, 2018).

## References

- Al-Ali, N. (2008). Iraqi women and gender relations: Redefining difference. *British Journal of Middle Eastern Studies*, 35(3), 405–418.  
<https://doi.org/10.1080/13530190802525155>
- Anderson, L. W., & Krathwohl, D. (Eds.). (2001). *A taxonomy for learning, teaching and assessing: A revision of Bloom's taxonomy of educational objectives*. Harlow, UK: Longman.
- Anding, J. (2005). An interview with Robert E. Quinn. Entering the fundamental state of leadership: Reflections on the path to transformational teaching. *Academy of Management Learning and Education*, 4(4), 487–495.  
<https://doi.org/10.5465/amle.2005.19086790>
- Ballen, C. J., Wieman, C., Salehi, S., Searle, J. B., & Zamudio, K. R. (2017). Enhancing diversity in undergraduate science: Self-efficacy drives performance gains with active learning. *CBE—Life Sciences Education*, 16(4), ar56.  
<https://doi.org/10.1187/cbe.16-12-0344>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44(9), 1175–1184. <https://doi.org/10.1037/0003-066X.44.9.1175>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman and Company
- Bandura, A., & Schunk, D. H. (1981). Cultivating competence, self-efficacy, and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology*, 41(3), 586–598. <https://doi.org/10.1037/0022-3514.41.3.586>
- Baron, J., & Brown, R. V. (2012). *Teaching decision-making to adolescents*. New York, NY: Routledge.
- Beck, H. P., Rorrer-Woody, S., & Pierce, L. G. (1991). The relations of learning and grade orientations to academic performance. *Teaching of Psychology*, 18(1), 35–37.  
[https://doi.org/10.1207/s15328023top1801\\_10](https://doi.org/10.1207/s15328023top1801_10)
- Bloom, B. S. (Ed.). (1956). *Taxonomy of educational objectives. Cognitive domain*. New York, NY: McKay.
- Bloom, B. S. (1976). *Human characteristics and school learning*. McGraw Hill.
- Bouffard-Bouchard, T. (1990). Influence of self-efficacy on performance in a cognitive task. *The Journal of Social Psychology*, 130(3), 353–363.  
<http://dx.doi.org/10.1080/00224545.1990.9924591>
- Brown-Jeffy, S. & Cooper, J. E. (2011). Toward a conceptual framework of culturally relevant pedagogy: An overview of the conceptual and theoretical literature. *Teacher Education Quarterly*, 38(1), 65–84.
- Camp, E. M., & Oesterreich, H. A. (2010). Uncommon teaching in commonsense times. *Multicultural Education*, 17(2), 20–26.
- Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods*, 4(1), 62–83.  
<https://doi.org/10.1177/109442810141004>

- Chen, G., Gully, S. M., Whiteman, J.-A., & Kilcullen, R. N. (2000). Examination of relationships among trait-like individual differences, state-like individual differences, and learning performance. *Journal of Applied Psychology*, 85(6), 835–847. <https://doi.org/10.1037/0021-9010.85.6.835>
- Cohen, G. L., Steele, C. M., & Ross, L. D. (1999). The mentor's dilemma: Providing critical feedback across the racial divide. *Personality and Social Psychology Bulletin*, 25(10), 1302–1318. <https://doi.org/10.1177/0146167299258011>
- Coutinho, S. A. (2007). The relationship between goals, metacognition, and academic success. *Educate*, 7(1), 39–47.
- Dee, T. S., & Penner, E. K. (2017). The causal effects of cultural relevance: Evidence from an ethnic studies curriculum. *American Educational Research Journal*, 54(1), 127–166. <https://doi.org/10.3102/0002831216677002>
- Ding, N., Xu, X., Yang, H., Li, Y., & van Heughten, P. (2020). Decision-making styles of Chinese business students. *Journal of Education for Business*, 95(6), 351–358. <https://doi.org/10.1080/08832323.2019.1654968>
- D'Lima, G. M., Winsler, A., & Kitsantas, A. (2014). Ethnic and gender differences in first-year college students' goal orientation, self-efficacy, and extrinsic and intrinsic motivation. *The Journal of Educational Research*, 107(5), 341–356. <https://doi.org/10.1080/00220671.2013.823366>
- Eison, J. A. (1982). Educational and personal dimensions of learning- and grade-oriented students. *Psychological Reports*, 51(3), 867–870. <https://doi.org/10.2466/pr0.1982.51.3.867>
- Eison, J. A., Janzow, F., & Pollio, H. R. (1993). Assessing faculty orientations towards grades and learning: Some initial results. *Psychological Reports*, 73(2), 643–656. <https://doi.org/10.2466/pr0.1993.73.2.643>
- Eison, J. A., & Pollio, H. R. (1985). A multidimensional approach to the definition of college students' learning styles. *Journal of College Student Personnel*, 26(5), 434–443.
- Eison, J. A., & Pollio, H. R. (1989). *LOGO II bibliographic and statistical update*. Cape Girardeau, MO: Southeast Missouri State University, Center for Teaching and Learning.
- Eison, J. A., Pollio, H. R., & Milton, O. (1983). *Manual for use with LOGO-II*. Knoxville, TN: Tennessee Research and Creative Exchange.
- Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, 72(1), 218–232. <https://doi.org/10.1037/0022-3514.72.1.218>
- Faqe, C. K., Moheddin, K. R., & Kakamad, K. K. (2016). Reducing test anxiety among 12<sup>th</sup> grade students: Iraqi Kurdistan Region/Soran City as an example. *Journal of Education and Practice*, 7(27), 69–75.
- Farias, G., Farias, C. M., & Fairfield, K. D. (2010). Teacher as judge or partner: The dilemma of grades versus learning. *Journal of Education for Business*, 85(6), 336–342. <https://doi.org/10.1080/08832321003604961>
- Filippello, P., Sorrenti, L., Larcán, R., & Rizzo, A. (2013). Academic underachievement, self esteem and self-efficacy in decision making. *Mediterranean Journal of Clinical Psychology*, 1(3), 1–11. <https://doi.org/10.6092/2282-1619/2013.1.934>

- Focht, W., & Bell, D. V. (2018). Why education for sustainable human and environmental systems?. In W. Focht, M. A. Reiter, P. A. Barresi, & R. C. Smardon (Eds.), *Education for sustainable human and environmental systems* (pp. 3–18). London, UK: Routledge.
- Folk, A. (2018). Drawing on students' funds of knowledge: using identity and lived experience to join the conversation in research assignments. *Journal of Information Literacy*, 12(2), 44–59. <http://dx.doi.org/10.11645/12.2.2468>
- Gao, S. (2014). Relationship between science teaching practices and students' achievement in Singapore, Chinese Taipei, and the US: An analysis using TIMSS 2011 data. *Frontiers of Education in China*, 9(4), 519–551. <https://doi.org/10.1007/BF03397039>
- Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice*. New York, NY: Teachers College Press.
- Harju, B. L., & Eppler, M. (1997). Achievement motivation, flow and irrational beliefs in traditional and nontraditional college students. *Journal of Instructional Psychology*, 24(3), 147–157.
- Harris, C. M., & Harris, J. S. (1987). *Learning Orientation and Academic Achievement* (Report No. ED 283 107). U.S. Department of Education. <https://files.eric.ed.gov/fulltext/ED283107.pdf>
- Howard, T. C. (2003). Culturally relevant pedagogy: Ingredients for critical teacher reflection. *Theory into Practice*, 42(3), 195–202. [https://doi.org/10.1207/s15430421tip4203\\_5](https://doi.org/10.1207/s15430421tip4203_5)
- Howard, T., & Rodriguez-Scheel, A. (2017). Culturally relevant pedagogy 20 years later: Progress or pontificating? What have we learned, and where do we go? *Teachers College Record*, 119(1), 1–32.
- Janis, I. L., & Mann, L. (1977). *Decision making: A psychological analysis of conflict, choice, and commitment*. New York, NY: Free press.
- Johnston, J. H., Driskell, J. E., & Salas, E. (1997). Vigilant and hypervigilant decision-making. *Journal of Applied Psychology*, 82(4), 614–622. <https://doi.org/10.1037/0021-9010.82.4.614>
- Kohn, A. (1993). *Punished by rewards: The trouble with gold stars, incentive plans, A's, praise, and other bribes*. Boston, MA: Houghton Mifflin.
- Kornilova, T. V., Chumakova, M. A., & Krasavtseva, Y. V. (2018). Emotional intelligence, patterns for coping with decisional conflict, and academic achievement in cross-cultural perspective (evidence from selective Russian and Azerbaijani student populations). *Psychology in Russia: State of the Art*, 11(2), 114–133. <https://doi.org/10.11621/pir.2018.0209>
- Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into Practice*, 41(4), 212–218. [https://doi.org/10.1207/s15430421tip4104\\_2](https://doi.org/10.1207/s15430421tip4104_2)
- Ladson-Billings, G. (1994). *The dreamkeepers: Successful teachers of African American children*. San Francisco, CA: Jossey-Bass.
- Ladson-Billings, G. (2006). Yes, but how do we do it? Practicing culturally relevant pedagogy. In J. Landsman & C. W. Lewis (Eds.), *White teachers/diverse classrooms: A guide to building inclusive schools, promoting high expectations, and eliminating racism* (pp. 29–42). Sterling, VA: Stylus.

- Ladson-Billings, G. (2014). Culturally relevant pedagogy 2.0: a.k.a. the remix. *Harvard Educational Review*, 84(1), 74-84.  
<https://doi.org/10.17763/haer.84.1.p2rj131485484751>
- Lane, J., & Lane, A. (2001). Self-efficacy and academic performance. *Social Behavior and Personality: An International Journal*, 29(7), 687–693.  
<https://doi.org/10.2224/sbp.2001.29.7.687>
- Lee, C. D. (1998). Culturally responsive pedagogy and performance-based assessment. *Journal of Negro Education*, 67(3), 268–279. <https://doi.org/10.2307/2668195>
- Lee, C. D. (2006). “Every good-bye ain’t gone”: Analysing the cultural underpinnings of classroom talk. *International Journal of Qualitative Studies in Education*, 19(3), 305–327. <https://doi.org/10.1080/09518390600696729>
- Manfra, M. M. (2019). Action research and systematic, intentional change in teaching practice. *Review of Research in Education*, 43(1), 163–196.  
<https://doi.org/10.3102/0091732X18821132>
- Mann, L., Burnett, P., Radford, M., & Ford, S. (1997). The Melbourne Decision Making Questionnaire: An instrument for measuring patterns for coping with decisional conflict. *Journal of Behavioral Decision Making*, 10(1), 1–19.  
[https://doi.org/10.1002/\(SICI\)1099-0771\(199703\)10:1<1::AID-BDM242>3.0.CO;2-X](https://doi.org/10.1002/(SICI)1099-0771(199703)10:1<1::AID-BDM242>3.0.CO;2-X)
- Masika, R., Wisker, G., Dabbagh, L., Akreyi, K. J., Golmohamad, H., Bendixen, L., & Crawford, K. (2014). Female academics’ research capacities in the Kurdistan region of Iraq: Socio-cultural issues, personal factors and institutional practices. *Gender and Education*, 26(1), 52–69. <https://doi.org/10.1080/09540253.2013.873391>
- Metcalfe, B. (2008). Women, management, and globalization. *Journal of Business Ethics*, 83(1), 85–100. <https://doi.org/10.1007/s10551-007-9654-3>
- Moore, T. T., & Chang, J. C. J. (2009). Self-efficacy, overconfidence, and the negative effect on subsequent performance: A field study. *Information & Management*, 46(2), 69–76. <https://doi.org/10.1016/j.im.2008.11.006>
- Morrison, K. A., Robbins, H. H., & Rose, D. G. (2008). Operationalizing culturally relevant pedagogy: A synthesis of classroom-based research. *Equity & Excellence in Education*, 41(4), 433–452. <https://doi.org/10.1080/10665680802400006>
- O’Connor, K. (2020). Constructivism, curriculum and the knowledge question: tensions and challenges for higher education. *Studies in Higher Education*. Advance online publication. <https://doi.org/10.1080/03075079.2020.1750585>
- Page, S., & Alexitch, L. R. (2003). Learning-and grade-orientation, sex, and prediction of self reported academic performance. *Psychological Reports*, 92(1), 320–324.  
<https://doi.org/10.2466/pr0.2003.92.1.320>
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66(4), 543–578. <https://doi.org/10.3102/00346543066004543>
- Parker, T. C. T., & Rosenthal, R. (2011). Sustainable equity: Avoiding the pendulum effect in the life sciences. In *Forum on Public Policy Online* (Vol. 2011, No. 2). Oxford, UK: Oxford Round Table.
- Payne, J. W., Bettman, J. R., & Johnson, E. J. (1992). Behavioral decision research: A constructive processing perspective. *Annual Review of Psychology*, 43, 87–131.  
<https://doi.org/10.1146/annurev.ps.43.020192.000511>

- Pilotti, M. A. E. (2021). Is academic success just a matter of showing up? A study of the contribution of individual differences and attendance to performance. In I. A. Sánchez, P. Kommers, T. Issa, & P. Isaías (Eds.), *Proceedings of the 8th International Conference on Educational Technologies* (pp. 116–126). Lisbon, PT: IADIS Press.
- Pilotti, M. A. E., & Al Mubarak, H. (2021). Systematic versus informal application of culturally relevant pedagogy: Are performance outcomes different? A study of college students. *Journal of Culture and Values in Education*. Advance online publication. <https://doi.org/10.46303/jcve.2021.1>
- Royal, C., & Gibson, S. (2017). They schools: Culturally relevant pedagogy under siege. *Teachers College Record*, 119(1), 1–25.
- Sagone, E., & Indiana, M. L. (2021). Are decision-making styles, locus of control, and average grades in exams correlated with procrastination in university students? *Education Sciences*, 11(6), 300. <https://doi.org/10.3390/educsci11060300>
- Schmeichel, M. (2012). Good teaching: An examination of culturally relevant pedagogy as an equity practice. *Journal of Curriculum Studies*, 44(2), 211–231. <https://doi.org/10.1080/00220272.2011.591434>
- Schraw, G., Horn, C., Thorndike-Christ, T., & Bruning, R. (1995). Academic goal orientations and student classroom achievement. *Contemporary Educational Psychology*, 20(3), 359–368. <https://doi.org/10.1006/ceps.1995.1023>
- Sheets, R. H. (1995). From remedial to gifted: Effects of culturally centered pedagogy. *Theory Into Practice*, 34(3), 186–193. <https://doi.org/10.1080/00405849509543678>
- Siwatu, K. O. (2007). Preservice teachers' culturally responsive teaching self-efficacy and outcome expectancy beliefs. *Teaching and Teacher Education*, 23(7), 1086–1101. <https://doi.org/10.1016/j.tate.2006.07.011>
- Soltanpanah, J., Parks-Stamm, E. J., Martiny, S. E., & Rudmin, F. W. (2018). A cross-cultural examination of the relationship between egalitarian gender role attitudes and life satisfaction. *Sex Roles*, 79(1), 50–58. <https://doi.org/10.1007/s11199-017-0859-3>
- Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, 133(1), 65–94. <https://doi.org/10.1037/0033-2909.133.1.65>
- Taggart, A. (2017). The role of cultural discontinuity in the academic outcomes of Latina/o high school students. *Education and Urban Society*, 49(8), 731–761. <https://doi.org/10.1177/0013124516658522>
- Tyler, K. M., Uqdah, A. L., Dillihunt, M. L., Beatty-Hazelbaker, R., Conner, T., Gadson, N., Henchy, A., Hughes, T., Mulder, S., Owens, E., Roan-Belle, C., Smith, L., & Stevens, R. (2008). Cultural discontinuity: Toward a quantitative investigation of a major hypothesis in education. *Educational Researcher*, 37, 280–297. <https://doi.org/10.3102/0013189X08321459>
- Vancouver, J. B., Thompson, C. M., Tischner, E. C., & Putka, D. J. (2002). Two studies examining the negative effect of self-efficacy on performance. *Journal of Applied Psychology*, 87(3), 506–516. <https://doi.org/10.1037/0021-9010.87.3.506>
- VandeWalle, D., Cron, W. L., & Slocum, J. W., Jr. (2001). The role of goal orientation following performance feedback. *Journal of Applied Psychology*, 86(4), 629–640. <https://doi.org/10.1037/0021-9010.86.4.629>

- Walker, A. (2019). Culturally relevant pedagogy, identity, presence, and intentionality: A brief review of literature. *Journal of Research Initiatives*, 4(3), 1–13.
- Young, E. (2010). Challenges to conceptualizing and actualizing culturally relevant pedagogy: How viable is the theory in classroom practice?. *Journal of Teacher Education*, 61(3), 248–260. <https://doi.org/10.1177/0022487109359775>

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## Appendix A

### *NGSE* Questionnaire (Chen et al., 2021, p. 79)

I will be able to achieve most of the goals that I have set for myself.  
 When facing difficult tasks, I am certain that I will accomplish them.  
 In general, I think that I can obtain outcomes that are important to me.  
 I believe I can succeed at most any endeavor to which I set my mind.  
 I will be able to successfully overcome many challenges.  
 I am confident that I can perform effectively on many different tasks.  
 Compared to other people, I can do most tasks very well.  
 Even when things are tough, I can perform quite well.

### The Attitude Portion of the *LOGO II* Questionnaire

Easy classes that are not pertinent to my educational goals generally bore me.  
 I get annoyed when lectures or class presentations are only rehashes of easy reading assignments. I enjoy classes in which the instructor attempts to relate material to concerns beyond the classroom.  
 I appreciate the instructor who provides honest and detailed evaluation of my work though such evaluation is sometimes unpleasant.  
 I am more concerned about seeing which questions I missed than I am with finding out my test grade.  
 I find the process of learning new material fun.  
 An instructor's comments on an essay test mean more to me than my actual test score.  
 I prefer to write a term paper on interesting material than to take a test on the same general topic.  
 I dislike courses in which a lot of material is presented in class, or in readings, that does not appear on exams.  
 I do not find studying at home to be interesting or pleasant.  
 Instructors expect too much out-of-class reading and study by students.  
 I think that without regularly scheduled exams I would not learn and remember very much.  
 Written assignments (i.e., homework, projects, etc.) that are not graded are a waste of a student's time.  
 I think it is unfair to test students on material not covered in class lectures and discussions, even if it is in reading assignments.  
 I dislike courses which require ungraded out-of-class activities.  
 I think grades provide me a good goal to work toward.  
*Note:* The term “teacher” in the original scale was changed to “instructor”

### *DM* Questionnaire (Mann et al., 1997, p.12) with items organized by patterns

#### *Vigilance*

I like to consider all of the alternatives.  
 I try to find out the disadvantages of all alternatives.  
 I consider how best to carry out a decision.  
 When making decisions, I like to collect a lot of information.  
 I try to be clear about my objectives before choosing.  
 I take a lot of care before choosing.

*Buck-passing*

I avoid making decisions.

I do not make decisions unless I really have to.

I prefer to leave decisions to others.

I do not like to take responsibility for making decisions.

If a decision can be made by me or another person, I let the other person make it.

I prefer that people who are better informed decide for me.

*Procrastination*

I waste a lot of time on trivial matters before getting to the final decision.

Even after I have made a decision, I delay acting upon it.

When I have to make a decision, I wait a long time before starting to think about it.

I delay making decisions until it is too late.

I put off making decisions.

*Hypervigilance*

Whenever I face a difficult decision, I feel pessimistic about finding a good solution.

I feel as if I am under tremendous time pressure when making decisions.

The possibility that some small thing might go wrong causes me to swing abruptly in my preference.

I cannot think straight if I have to make a decision in a hurry.

After a decision is made, I spend a lot of time convincing myself it was correct.

## **Exploring the Relationship between Socioemotional Skills and Decision-Making Styles in Health Students**

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### Abstract

Higher education in health study programs is particularly focused on the development of technical skills, despite there being a consensus on the importance of training students regarding socioemotional and life skills. The aim of this study was to characterize and explore correlations between socioemotional skills and decision-making styles in undergraduate health students. Undergraduate students (18–25 years old) were recruited at a School of Health Sciences in Portugal. Participants were characterized in terms of sociodemographic data, socioemotional skills (Study on Social and Emotional Skills questionnaire) and decision-making styles (Melbourne Decision Making questionnaire). Descriptive statistics and correlations between questionnaires' subscales were calculated. Students presented higher scores in tolerance ( $34.8 \pm 3.4$ ), cooperation ( $34.7 \pm 2.4$ ), empathy ( $31.1 \pm 3.2$ ), vigilance ( $16.0 \pm 1.9$ ), and procrastination ( $9.9 \pm 2.1$ ). Assertiveness presented negative correlations with buck-passing ( $\rho = -0.43$ ,  $p < 0.01$ ) and procrastination ( $\rho = -0.38$ ,  $p < 0.01$ ) and positive correlation with vigilance ( $\rho = 0.22$ ,  $p = 0.03$ ). Students demonstrated higher values in empathy, cooperation, and tolerance skills, meaning they tend to be kind and care for others' well-being. Vigilance style is related to assertiveness characterizing hard working leaders able to pay attention to others' needs. Training that involves socioemotional skills might be crucial for the style of decision-making in future health professionals.

**Keywords:** decision-making styles, health students, interdisciplinary study programs, socioemotional skills

## Introduction

Higher education in health study programs is particularly focused on technical skills development, despite there being a consensus on the importance of training students in regard to socioemotional and life skills (Ribeiro, Severo, & Ferreira, 2016; Rodríguez-Nogueira, Moreno-Poyato, Álvarez-Álvarez, & Pinto-Carral, 2020). In this context, it is crucial to include the training of transversal skills in the academic curriculum of health students, as these skills can facilitate interpersonal relationships, accountability, and decision-making in a clinical setting (Çinar, Dinler, & Yakut, 2019). The quality of interpersonal relationships in health professionals relies on socioemotional skills, and it is reflected in ineffective or effective communication. Ineffective communication can make patients feel anxious, uncertain, and generally unsatisfied with their care, while it is also linked to increased stress, lack of job satisfaction, and emotional burnout amongst health professionals (Moore, Rivera, Bravo-Soto, Olivares, & Lawrie, 2018).

The care, respect, and tolerance that occur while a health professional is taking care of someone are strong indicators of quality in health practices (Gazarian et al., 2021). For example, the ability to establish an empathic relationship between health professionals and patients is a key transversal skill that might be crucial not only to encourage patients' adherence to treatments but also to promote patients' outcomes (Moudatsou, Stavropoulou, Philalithis, & Koukouli, 2020). In fact, for attaining high standards in patients' care, it is essential to include social skills training for stimulating the inter-professional working performance (Singh & Salisbury, 2019; Wang, Shi, Bai, Zheng, & Zhao, 2015). In addition, when a health professional uses non-assertive communication, this might happen because of low self-image and confidence, which consequently can hamper shared decision-making and decrease patients' empowerment (Pakarinen, Parisod, Smed, & Salanterä, 2017). Another important social skill for health professionals is cooperation, which characterizes the ability to coordinate decisions and actions through constructive dialogue. This skill is one of the most important elements for interprofessional and multidisciplinary efficient work in health teams (Molleman, Broekhuis, Stoffels, & Jaspers, 2008). Interestingly, the higher the complexity of the health care is, the more important is cooperation (Jünger, Pestinger, Elsner, Krumm, & Radbruch, 2007).

Training adaptable and innovative health professionals was identified as an urgent need in biomedical fields (Rodríguez, Díez, Pérez, Baños, & Carrió, 2019; Royce, Hayes, & Schwartzstein, 2019; Scott, Leritz, & Mumford, 2004). To reach this profile, health professionals should develop skills such as creativity, critical thinking, and problem solving and be specially trained in flexible and open environments (Rodríguez et al., 2019; Royce et al., 2019; Scott et al., 2004). These skills are major contributors for decision-making by health care professionals, which is particularly characterized by low level of structuredness (Brock et al., 2013; Morley & Cashell, 2017; O'Daniel & Rosenstein, 2008; Pitel & Mentel, 2017). Poor decision-making abilities may prejudice team collaboration between health professionals, having impact in the quality of care (Brock et al., 2013; Morley & Cashell, 2017; O'Daniel & Rosenstein, 2008). Therefore, further understanding of the major coping patterns in decision-making in this field, including their associated risks and advantages, should be recommended earlier in undergraduate study programs (Pitel & Mentel, 2017).

Previous studies already discussed the importance of socioemotional skills and decision-making styles for high quality practices in health care. Most of these studies focused on real clinical settings, such as palliative care and chronic diseases (Bloomer et al., 2018; Kryworuchko, Strachan, Nouvet, Downar, & You, 2016). Fewer studies focused on analysing

these skills in undergraduate health students, mainly characterising these abilities in the context of a specific study program (e.g., nursing) (K. L. Brooks & Shepherd, 1990; Expósito, Jiménez-Rodríguez, Agea, Izquierdo, & Costa, 2019; Mauriz, Caloca-Amber, Córdoba-Murga, & Vázquez-Casares, 2021; Noohi, Karimi-Noghondar, & Haghdoost, 2012). However, socioemotional and decision-making skills are particularly relevant in multi-disciplinary scenarios (Chong, Aslani, & Chen, 2013; Hofstede et al., 2013; Soukup et al., 2018; Uitdewilligen & Waller, 2018), providing crucial abilities, for example in the registration and management of interprofessional clinical information. As such, before starting to think about interdisciplinary educational programs for health students, it would be important to characterize students' socioemotional and decision-making profiles (Gordon, Hill, Stojan, & Daniel, 2018). Therefore, this study aimed to characterize socioemotional skills and decision-making styles in undergraduate health students at a Portuguese health school with interdisciplinary health programs. As a secondary objective, this study explored possible correlations between students' decision-making styles and socioemotional skills.

### **Methodology**

A descriptive quantitative cross-sectional study was conducted using self-report high-quality instruments, allowing the characterization of students' socioemotional skills and decision-making styles, and establishing relationships between them.

#### **Participants and Setting**

Data were collected between October and November 2020 at the School of Health Sciences of the Polytechnic Institute of Leiria. A call for participation was posted in the school's community website targeting undergraduate students. Students interested in participating were invited to provide informed consent through an electronic form. Respondents under 18 and over 25 years old were excluded. Eligible students received an online link providing access to the questionnaires used for data collection. All electronic data collection procedures were delivered using Google Forms.

#### **Sociodemographic Questionnaire**

Sociodemographic characterization of the recruited students was based on the following variables: age (years), sex (female; male), study program, and academic year of the study program (1st year; 2nd year; 3rd year, 4th year).

#### **Study on Social and Emotional Skills**

The Study on Social and Emotional Skills (SSES) instrument was developed to assess social and emotional skills in children and young people and how they interact with their life contexts, namely regarding family, at school, and in the community (Kankaraš & Suarez-Alvarez, 2019). For this purpose, the Organization for Economic Cooperation and Development (OECD) proposed the development of an instrument that assesses these skills to characterize the socioemotional domain of children and young people around the world.

In its original version, the SSES evaluated 15 social and emotional competences. After the literature review process, 14 of the competencies assessed by the instrument were added to contribute to the assessment of the program's target competencies. Thus, the SSES instrument was organized into subdomains or dimensions of the target competencies (Chernyshenko, Kankaraš, & Drasgow, 2018; Kankaraš, Feron, & Renbarger, 2019).

Each subdomain consists of eight items, corresponding to eight questions, which are randomly reorganized. The final full version of SSES has 12 sets of eight items each, making a total of 96 items. Each item is evaluated on a 5-point Likert scale: 1 corresponds to “Strongly disagree” and 5 corresponds to “Strongly agree”. For this study, seven subdomains were selected, (assertiveness (ASS), cooperation (COO), creativity (CRE), empathy (EMP), sociability (SOC), tolerance (TOL), and trust (TRU)). For each of subdomains selected, a final score was calculated as the sum of the corresponding items after inverting the values associated with items ASS5, COO4, CRE3, CRE7, CRE8, EMP8, SOC4, TOL6, and TRU5. The final score of each subdomain ranged between 8 and 40 points. Higher values represent a higher degree on the domain being evaluated.

This instrument was designed to allow the triangulation of information between parents and children/young people, with a version for parents/guardians and another for children/young people. However, given that the participants were students of a higher education institution, the parents’ version of the instrument was not used. The SSES instrument is applicable to students between the ages of 8 and 25 years, approximately. The response time limit for this instrument is expected to be a maximum of thirty minutes.

### **Melbourne Decision Making Questionnaire**

The Melbourne Decision Making Questionnaire (MDMQ) (Mann, Burnett, Radford, & Ford, 1997) is an improvement of the Flinders Decision Making Questionnaire (FDMQ) developed by Mann (1982), which intended to identify the decision-making styles based on several patterns of coping behavior. MDMQ showed itself to be applicable to different ages and genders and can be easily and quickly applied. MDMQ is available in European Portuguese to evaluate stress-related patterns while making decisions, enabling comparison within and between different subjects, which is not only useful for training purposes but also for other studies of decision-making (Filipe, Alvarez, Roberto, & Ferreira, 2020). MDMQ characterizes attitudes, behaviors, or thoughts of individuals concerning decision-making by evaluating the respondent’s rating to 22 statements using a 3-points Likert scale (1—not true about me; 2—sometimes true; 3—true about me). These 22 statements are organized in four subscales: vigilance (six statements), buck-passing (six statements), hypervigilance (five statements), and procrastination (five statements). Vigilance reflects a careful and well-planned approach to decision-making, while hypervigilance is associated with impulsive and unplanned actions in the face of the decision-making situation (Cotrena, Branco, & Fonseca, 2017). On the other hand, procrastination and buck-passing are linked with defensive and evasive attitudes toward decision-making.

For each MDMQ subscale, a final score was calculated as the sum of the corresponding statements. For vigilance and buck-passing, the final score value ranged between six and 18 points; for hypervigilance and procrastination, the final score value ranged between five and 15 points. Higher values represent a higher degree on the subscale being evaluated.

### **Statistical analysis**

Descriptive statistics of sociodemographic and academic data, social emotional skills (SSES), and decision-making styles (MDMQ) are presented as absolute and relative frequencies or as mean and standard deviation (SD) as appropriate. To explore the relationship between SSES subdomains and MDMQ decision-making subscales, Spearman’s correlation coefficients ( $\rho$ ) were calculated. Correlations values were interpreted as follows: 0-0.09 negligible correlation; 0.1-0.29 weak correlation; 0.3-0.49 moderate correlation; 0.7-0.89 strong correlation; 0.9-1 very strong correlation (Cohen, 1988).

All statistical analysis were performed using the Statistical Package for Social Sciences (SPSS®) software Version 27.0 (IBM, Armonk, New York, USA). The level of statistical significance was set to  $p \leq 0.05$ .

## Results

### Sociodemographic Characterization

In total, 97 (n=97) students volunteered for the study; from these, two did not provide complete information and were excluded from the sample. Therefore, the final sample consisted of 95 students enrolled in undergraduate health study programs (bachelor; four-year study programs) and higher technical courses (CTeSP; two-year study program). Table 1 presents students' sociodemographic and academic information. Students had a mean ( $\pm$ standard deviation (SD)) age of 20.28 ( $\pm 2.90$ ) years old and were mostly women (n=83, 87.4%). Most students were enrolled in undergraduate study programs (n=89; 93.7%), with only six (6.3%) students enrolled in the Assistive Health Products higher technical course. Distribution by undergraduate study program was as follows: physical therapy (n=28, 29.5%), dietetics and nutrition (n=24, 25.3%), nursing (n=18, 18.9%), occupational therapy (n=18, 18.9%), and speech therapy (n=1, 1.1%). Thirty-three (n=33, 34.7%) students were registered in the first year of the study program; 26.6% (n=25) were registered in the second year, 29.5% (n=28) in the third year, and 9.5% of the students (n=9) were registered in the fourth year.

**Table 1**

*Sociodemographic and academic characterization (n=95)*

	Students
Age (years), Mean $\pm$ SD	20.28 $\pm$ 2.90
Sex, n (%)	
Female	83 (87.4)
Male	12 (12.6)
Study Program, n (%)	
Dietetics and nutrition	24 (25.3)
Nursing	18 (18.9)
Occupational therapy	18 (18.9)
Physical therapy	28 (29.5)
Speech therapy	1 (1.1)
Assistive health products	6 (6.3)
Academic Year, n (%)	
1st year	33 (34.7)
2nd year	25 (26.3)
3rd year	28 (29.5)
4th year	9 (9.5)

Abbreviations: SD, standard deviation

**Social and emotional skills characterization.** Table 2 summarizes the responses in the individual items and the total score in the selected subdomains of SSSES. Health students presented higher total scores in tolerance ( $34.8 \pm 3.4$ ), cooperation ( $34.7 \pm 2.4$ ), and empathy ( $31.1 \pm 3.2$ ), followed by creativity ( $29.1 \pm 4.7$ ), trust ( $28.1 \pm 4.1$ ), sociability ( $28.0 \pm 2.9$ ), and assertiveness ( $22.7 \pm 5.9$ ).



**Table 2**  
*Social and emotional skills characterization (n=95)*

Item	ASS	COO	CRE	EMP	SOC	TOL	TRU
1	3.1±0.9	4.8±0.4	4.0±0.6	4.2±0.5	3.6±0.8	4.8±0.4	3.6±0.7
2	2.7±1.0	4.3±0.5	3.5±0.8	4.8±0.4	3.2±0.8	4.0±0.7	3.5±0.9
3	3.1±0.8	4.1±0.5	2.1±0.9	3.8±0.8	4.7±0.5	3.7±0.8	3.9±0.6
4	2.9±0.9	2.3±0.9	3.5±0.7	3.6±0.8	3.6±1.1	4.8±0.5	3.3±0.9
5	2.8±1.0	4.7±0.5	3.4±1.0	3.4±0.7	4.0±0.7	4.5±0.6	3.1±0.9
6	2.5±1.0	4.4±0.6	3.7±0.9	3.6±0.6	4.2±0.7	1.5±1.0	4.2±0.7
7	2.9±1.0	4.3±0.6	2.4±0.9	3.8±0.7	3.4±1.0	4.2±0.7	3.2±0.9
8	2.3±0.9	4.5±0.5	2.5±0.9	2.2±0.9	2.5±1.0	4.5±0.6	3.5±0.7
TOTAL	22.7±5.9	34.7±2.4	29.1±4.7	31.1±3.2	28.0±2.9	34.8±3.4	28.1±4.1

Data are represented as mean  $\pm$  standard deviation. ASS–assertiveness; COO–cooperation; CRE–creativity; EMP–empathy; SOC–sociability; TOL–tolerance; TRU–trust. ASS1–I am a leader; ASS2–I want to command; ASS3–I know how to convince others to do what I want; ASS4–I like to lead others; ASS5–I do not like to lead a team; ASS6–I like to be leader in my class; ASS7–I like to be the leader of a group; ASS8–I am dominant, and I act as a leader. COO1–I like to help others.; COO2–I get along well with others; COO3–I work well with other people; COO4–I start arguments with others; COO5–I treat others with respect; COO6–I am always willing to help my classmates; COO7–I am ready to help anybody; COO8–I am polite and courteous to others. CRE1–I find new ways of doing things; CRE2–I am original, and new ideas always come up; CRE3–I have a hard time imagining things; CRE4–I sometimes find a solution that other people do not see; CRE5–I like to invent things; CRE6–I have a good imagination; CRE7–I find it difficult to imagine new things; CRE8–I am not very creative. EMP1–I am helpful and unselfish with others; EMP2–It is important to me that my friends are okay; EMP3–I can sense how others feel; EMP4–I know how to comfort others; EMP5–I predict the needs of others; EMP6–I understand what others want; EMP7–I am warm toward others; EMP8–I rarely ask others how they are feeling. SOC1–I am outgoing and sociable; SOC2–I have many friends; SOC3–I like being with my friends; SOC4–I like to be alone; SOC5–I like to talk to many different people; SOC6–I like to spend my free time with others; SOC7–I make friends easily; SOC8–I have a hard time making friends. TOL1–I am interested in being friends with people from other cultures; TOL2–I ask questions about other cultures; TOL3–I feel comfortable in new cultural environments; TOL4–I want to travel to other countries; TOL5–I like to hear about other cultures and religions; TOL6–I am not interested in other countries and cultures; TOL7–I learn a lot from people of different beliefs; TOL8–I like to learn about other countries and cultures. TRU1–I think that most of my colleagues keep their promises; TRU2–I believe that my friends will never betray me; TRU3–I believe that my friends keep my secrets; TRU4–I believe that most people are kind; TRU5–I mistrust people; TRU6–I believe that other people will be able to help me; TRU7–I believe that most people are honest; TRU8–I trust others.

Responses to the items in subdomain tolerance showed that health students were inclusive (TOL1: 4.8±0.4) and open to knowing other countries and cultures (TOL4: 4.8±0.5; TOL6: 1.5±1.0). Cooperation outcomes revealed that health students like to help (COO1: 4.8±0.4) and respect others (COO5: 4.7±0.5) while tending to avoid conflicts and arguments with others (COO4: 2.3±0.9). Empathy outcomes showed that the health students strongly agree that it is important to know that their friends are doing well (EMP2: 4.8±0.4) and assume themselves as generous (EMP1: 4.2±0.5) and empathetic (EMP3: 3.8±0.8) to others. However, students revealed difficulty in knowing how to comfort others (EMP4: 3.6±0.8) and in predicting what others feel (EMP5: 3.4±0.7). In the responses to the items in the creativity subdomain, health students were shown to enjoy finding new solutions (CRE1: 4.0±0.6) and to have a good imagination (CRE6: 3.7±0.9) and creativity (CRE8: 2.5±0.9). Trust results showed that students stated clearly that they can count on others to help them (TRU6: 4.2±0.7) and believe in their friends (TRU3: 3.9±0.6). However, lower scores were observed in items about kindness (TRU4: 3.3±0.9), honesty (TRU7: 3.2±0.9), or trustfulness (TRU5: 3.1±0.9) of others. Sociability outcomes indicated that health students enjoy spending time with their friends (SOC3: 4.7±0.5; SOC6: 4.2±0.7), and that they have no difficulty in making new friends (SOC8: 2.5±1.0). However, it seems to be difficult for them to assume they have many friends

(SOC2:  $3.2 \pm 0.8$ ). Finally, responses to the items in the assertiveness subdomain seemed to be more diverse. Health students have difficulty in assuming a leader position (ASS1:  $3.1 \pm 0.9$ ) and consider themselves not to have the persuasive ability to convince others (ASS3:  $3.1 \pm 0.8$ ). Results also showed that participants do not like to be leaders of their class (ASS6:  $2.5 \pm 1.0$ ) and do not consider themselves to be dominant (ASS8:  $2.3 \pm 0.9$ ).

### Decision-Making Styles Characterization

The characterization of decision-making styles based on MDMQ can be found in Table 3. Results obtained revealed that health students present higher scores in vigilance ( $16.0 \pm 1.9$ ) and procrastination ( $9.9 \pm 2.1$ ) styles, followed by buck-passing ( $10.8 \pm 2.8$ ) and hypervigilance styles ( $8.4 \pm 1.9$ ).

**Table 3**

*Decision-making styles characterization based on MDMQ (Mann et al., 1997) (n=95)*

MDMQ Statements	Mean $\pm$ SD
<b>Vigilance</b>	$16.0 \pm 1.9$
2. I like to consider all the alternatives.	$2.8 \pm 0.4$
4. I try to find out the disadvantages of all alternatives.	$2.6 \pm 0.6$
6. I consider how best to carry out the decision.	$2.7 \pm 0.5$
8. When making decisions I like to collect lots of information.	$2.5 \pm 0.6$
12. I try to be clear about my objectives before choosing.	$2.8 \pm 0.5$
16. I take a lot of care before choosing.	$2.7 \pm 0.5$
<b>Buck-passing</b>	$10.8 \pm 2.8$
3. I prefer to leave decisions to others.	$1.7 \pm 0.6$
9. I avoid making decisions.	$1.8 \pm 0.6$
11. I do not like to take responsibility for making decisions.	$1.8 \pm 0.6$
14. If a decision can be made by me or another person, I let the other person make it.	$1.8 \pm 0.6$
17. I do not make decisions unless I really must have to.	$1.5 \pm 0.7$
19. I prefer that people who are better informed decide for me.	$2.1 \pm 0.7$
<b>Hypervigilance</b>	$8.4 \pm 1.9$
5. I waste a lot of time on trivial matters before getting to the final decision.	$2.0 \pm 0.7$
7. Even after I have made a decision, I delay acting upon it.	$1.9 \pm 0.7$
10. When I have to make a decision, I wait a long time before starting to think about it.	$1.4 \pm 0.6$
18. I delay making decisions until it is too late.	$1.4 \pm 0.5$
21. I put off making decisions.	$1.7 \pm 0.6$
<b>Procrastination</b>	$9.9 \pm 2.1$
1. I feel as if I'm under tremendous time pressure when making decisions.	$2.3 \pm 0.5$
13. The possibility that small things might go wrong causes-me to swing abruptly in my preferences.	$1.8 \pm 0.6$
15. Whenever I face a difficult decision, I feel pessimistic about finding a good solution.	$1.9 \pm 0.7$
20. After making a decision, I spend a lot of time convincing myself it was the right decision.	$1.9 \pm 0.7$
22. I cannot think straight if I have to make decisions in a hurry.	$2.0 \pm 0.7$

Abbreviation: SD, standard deviation

In the vigilance style, health students were shown to consider several alternatives and disadvantages (statement 2,  $2.8 \pm 0.4$ ) and to be clear about their objectives (statement 12,  $2.8 \pm 0.5$ ) before making a decision. Regarding the buck-passing style, data showed that students prefer to let other people decide when they are better-informed (statement 19,  $2.1 \pm 0.7$ ). Results on the procrastination style indicated that students feel tremendous pressure when they need to make decisions (statement 13,  $2.3 \pm 0.5$ ) and do not feel comfortable when they must make rush decisions (statement 22,  $2.0 \pm 0.7$ ). Finally, the results on the hypervigilance style revealed that students waste significant time before making a decision (statement 5,  $2.0 \pm 0.7$ ), and even after deciding, they take time to put it into practice (statement 7,  $1.9 \pm 0.7$ ).

### Correlations Between Socio-Emotional Skills and Decision-Making Style

Table 4 presents the Spearman correlation coefficients ( $\rho$ ) between the total scores of socio-emotional skills and decision-making styles. Statistically significant weak and moderate correlations can be observed between socio-emotional skills and decision-making styles.

**Table 4**

*Correlations between socio-emotional skills (SSES) and decision-making styles (MDMQ)*

	Vigilance	Buck-passing	Hypervigilance	Procrastination
Assertiveness	0.22*	-0.43**	-0.19	-0.38**
<i>p-value</i>	0.03	<0.01	0.06	<0.01
Cooperation	0.18	0.01	-0.14	-0.02
<i>p-value</i>	0.09	0.93	0.18	0.89
Creativity	0.15	-0.31**	-0.12	-0.16
<i>p-value</i>	0.14	<0.01	0.27	0.12
Empathy	0.24*	-0.20	-0.14	-0.11
<i>p-value</i>	0.02	0.06	0.17	0.29
Sociability	0.16	-0.15	0.01	0.02
<i>p-value</i>	0.12	0.14	0.90	0.88
Tolerance	0.19	-0.21*	-0.12	0.05
<i>p-value</i>	0.06	0.04	0.23	0.64
Trust	0.13	-0.11	-0.30**	-0.17
<i>p-value</i>	0.20	0.28	<0.01	0.09

\* Correlation is significant at the  $p\text{-value} \leq 0.05$ . \*\* Correlation is significant at the  $p\text{-value} \leq 0.01$ .

Assertiveness showed negative moderate correlations with buck-passing ( $\rho = -0.43$ ,  $p < 0.01$ ) and procrastination ( $\rho = -0.38$ ,  $p < 0.01$ ) and a positive weak correlation with vigilance ( $\rho = 0.22$ ,  $p = 0.03$ ). These results indicated that more assertive students tend to be less prone to buck-passing and procrastination but more prone to vigilance in their decision-making style. Creativity presented a negative moderate correlation with buck-passing ( $\rho = -0.31$ ,  $p < 0.01$ ). Thus, students with higher creativity scores seem to be less willing to adhere to buck-passing in the process of making a decision.

A positive weak correlation was found between empathy and vigilance ( $\rho = 0.24$ ,  $p = 0.02$ ), that is, when empathy scores increased, vigilance scores also tended to increase. On the other hand, tolerance showed a weak negative correlation with buck-passing ( $\rho = -0.21$ ,  $p = 0.04$ ), meaning that students with higher scores in tolerance exhibited lower scores of buck-passing. The negative moderate correlation between trust and hypervigilance ( $\rho = -0.30$ ,  $p < 0.01$ ) indicated that students who trust others (higher scores in trust) seem to adopt a less hypervigilant style (lower scores in hypervigilance) when making a decision.

No significant correlation was found between skills cooperation and sociability and MDMQ decision-making styles.

## Discussion

The main objective of this study was to characterize socioemotional skills and decision-making styles in undergraduate health students at a Portuguese Health School with interdisciplinary health programs. This study is a first step for the critical overview of Portuguese health students' profiles in terms of transversal competences. This critical overview is determinant for guiding the experimentation of innovative learning methodologies to increase the students' performance as health care providers in collaborative and multidisciplinary scenarios.

The students involved in this study demonstrated higher values in empathy, cooperation, and tolerance skills. The strong evidence of these socioemotional skills demonstrates that students are kind and care for others' well-being. Gustin (2017) explained that empathy relates to compassion, which is a core concept in caring science. The author stated that health professionals need compassion for promoting high quality care but also to guarantee professionals' well-being (Gustin, 2017). Furthermore, participants included in this study valued the interconnection as well as the importance of teamwork and mutual help items in the cooperation domain of the SSES instrument. In fact, the constant changes in the health care system and the complex health needs of patients require effective communication, teamwork, and interprofessional cooperation. According to Homeyer et al. (2018), health professionals that demonstrate effective cooperation can understand roles and responsibilities to efficiently communicate with peers and are most likely to feel increased job satisfaction. Finally, students demonstrated that they are open to different points of view and value foreign people and cultures. In future health professionals, tolerance was associated with originality, higher mental flexibility, openness to new ideas, and ethnic respect (Homeyer et al., 2018). Globally, empathy, cooperation, and tolerance are extremely important skills in a clinical context, as they are crucial for multidisciplinary teamwork, avoiding conflicts and fostering shared decisions.

Additionally, data from the present study demonstrated that one of the most evident decision-making styles was the vigilance style. This shows that health students can set high standards for themselves, work hard, and focus their attention on the current tasks to achieve personal goals (Cotrena et al., 2017). The results obtained also showed that vigilance is related to empathy and assertiveness, which means that leaders that can pay attention to the needs of others tend to make decisions using a vigilance style. In fact, empathy is related to cognitive functioning that affects decision-making, as empathetic people are kind and compassionate, which leads to the ability to listen to others' needs, studying various alternatives and establishing pros and cons before choosing without being domineering (Moore et al., 2018). Ioannidou & Konstantikaki (2008) stated that vigilance associated with empathy is a characteristic of emotional intelligence, describing it as a concept that involves skill and ability, which allows one to better manage the emotions of oneself, others, and groups. Success in different aspects of human life requires more than a significant intelligence quotient, since we all know people who are academically brilliant but are socially and interpersonally unfit (Ioannidou & Konstantikaki, 2008). Emotional intelligence is something that can be learned, thus it is important that young students in the health field exercise these skills, with the role of teachers being extremely relevant, since much of the learning in these professions is also done by modeling by experts (Goleman, 2001).

Students who participated in the present study used procrastination as a decision style, which indicates that they tend to feel pressure in decision-making and worry about being wrong because they want to make the right decision (Cotrena et al., 2017). Procrastination is related to assertiveness. In fact, being able to make the right decisions at the right time is a crucial part of leadership. Nevertheless, the lack of a proactive attitude can cause not only decisions getting delayed but leaders failing to effectively make decisions about key challenges in health care. Making decisions under pressure is a challenge in healthcare, thus assertiveness must be worked on to avoid stressful situations that can lead to anxiety and burnout (Zavala, Day, Plummer, & Bamford-Wade, 2018).

Studies on self-regulation theory versus externally regulated learning (de la Fuente-Arias, 2015, 2017) raised the hypothesis that a higher level of self-regulation is associated with a lower level of procrastination and, consequently, a higher level of procrastination is related to a lower level of performance. Steel (2007) showed that procrastinating students tend to have a higher number of negative results and lower average grades. In a study that involved 363 university students from two Colombian universities, Garzón-Umerenkova et al. (2018) pointed out that low levels of self-regulation are commonly observed among students who procrastinate. On the other hand, a negative association was found between procrastination and academic performance, which highlights the impact of procrastination on students' achievements (Garzón-Umerenkova & Flores, 2017).

Although buck-passing was not a dominant decision-making style for students that participated in this study, significant and negative correlations with assertiveness, creativity, and tolerance skills were observed. Previous studies observed that extraversion and openness to experience negatives predict buck-passing (Foti & Hauenstein, 2007; Rahaman, 2014). Buck-passing is a style that avoids decisions and responsibilities by delegating them to others. Delegation can result in a better decision when someone is more knowledgeable, which allows people to feel some relief and less responsible for negative outcomes (Brooks et al., 2015; Palmeira et al., 2015). Specifically, in health care contexts, it is important to be open to different points of view, developing leadership and creative thinking, since these socioemotional skills predict higher levels of job performance, adequate job attitudes, and an efficient team performance (Judge, Heller, & Mount, 2002).

In general, the results presented suggest that critical improvements are required on training decision-making in future health professionals. In fact, designing interprofessional programs to foster emergent and structured decision-making might be crucial in health students' training. In this context, innovative strategies have been proposed. For example, serious games were experienced for training decision making in students from biomedical courses, by involving students and educators in the cocreation of game-based scenarios and decision-tree game flow (Kaczmarczyk, Davidson, Bryden, Haselden, & Vivekananda-Schmidt, 2016). Also, virtual reality has been explored for training teamwork, communication, and situation awareness, by simulating scenarios of critical medical decisions that must be taken in a team context, with time constraints and immediate feedback (Bracq, Michinov, & Jannin, 2019). Although, these methodologies can potentially advance clinical decision training in health students, this topic has only been scarcely explored, and needs further investigation.

Although this study describes a relevant socioemotional and decision-making profile of health students, which might contribute for designing education training programs, there are limitations in methodology that need to be considered. First, the sample of students involved in this study is small and provides an inadequate representation of the school's students both

in terms of distribution by program study and academic year of attendance. Second, data were collected using self-reported instruments which may subject to several biases such as exaggeration. Furthermore, SSES transcultural adaptation and validation into Portuguese are ongoing tasks. Finally, some subdomains of SSES may not be the most suitable for the population studied and the intended characterization. In particular, the subdomain tolerance mainly focuses on interest and respect for other countries, cultures, and religions rather than on essential competence for health professionals such as acceptance of the other, of a different point of view, or of a behavior. In future studies, it would be interesting to include non-clinical healthcare students, as they have also an important role in planning health care programs, and they are rarely considered in research studies. In addition, future research in this field could be particularly focused on the importance of socioemotional and decision-making skills in health care provision during the COVID-19 crisis.

### Conclusion

Socioemotional skills and decision-making styles were studied in undergraduate health students at a Portuguese health school with interdisciplinary health programs. Students demonstrated higher values in empathy, cooperation, and tolerance skills, which means that they tend to be kind and care for others' well-being. The most evident decision-making style was vigilance style, which is related to empathy and assertiveness, characterizing hard-working leaders able to pay attention to others' needs. The students also demonstrated use of procrastination as a decision style, which might be a risk factor for academic negative results and for lower response to health care challenges. Interestingly, negative correlations between buck-passing and assertiveness, creativity, and tolerance skills highlight the importance of training these emotional skills to avoid this decision-making style in future health professionals. Understanding socioemotional and decision-making students' profile is a relevant information for guiding the experimentation of innovative learning methodologies, in order to increase the students' performance as health care providers in collaborative and multidisciplinary scenarios.

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## References

- Bloomer, M. J., Botti, M., Runacres, F., Poon, P., Barnfield, J., & Hutchinson, A. M. (2018). Communicating end-of-life care goals and decision-making among a multidisciplinary geriatric inpatient rehabilitation team: A qualitative descriptive study. *Palliative Medicine*, 32(10), 1615–1623. <https://doi.org/10.1177/0269216318790353>
- Bracq, M., Michinov, E., & Jannin, P. (2019). Virtual reality simulation in nontechnical skills training for healthcare professionals: A systematic review. *Simulation in Healthcare: Journal of the Society for Simulation in Healthcare*, 14(3), 188–194. <https://doi.org/10.1097/SIH.0000000000000347>
- Brock, D., Abu-Rish, E., Chiu, C.-R., Hammer, D., Wilson, S., Vorvick, L., ... Zierler, B. (2013). Interprofessional education in team communication: working together to improve patient safety. *BMJ Quality & Safety*, 22(5), 414–423. <https://doi.org/10.1136/bmjqs-2012-000952>
- Brooks, A. W., Gino, F., & Schweitzer, M. E. (2015). Smart people ask for (my) advice: Seeking advice boosts perceptions of competence. *Management Science*, 61(6), 1421–1435. <https://doi.org/10.1287/mnsc.2014.2054>
- Brooks, K. L., & Shepherd, J. M. (1990). The relationship between clinical decision-making skills in nursing and general critical thinking abilities of senior nursing students in four types of nursing programs. *The Journal of Nursing Education*, 29(9), 391–399. <https://doi.org/10.3928/0148-4834-19901101-05>
- Chernyshenko, O. S., Kankaraš, M., & Drasgow, F. (2018). *Social and emotional skills for student success and well-being*. (173). <https://doi.org/https://doi.org/https://doi.org/10.1787/db1d8e59-en>
- Chong, W. W., Aslani, P., & Chen, T. F. (2013). Multiple perspectives on shared decision-making and interprofessional collaboration in mental healthcare. *Journal of Interprofessional Care*, 27(3), 223–230. <https://doi.org/10.3109/13561820.2013.767225>
- Çınar, M. A., Dinler, E., & Yakut, Y. (2019). The Effect Of Creative Drama On Empathic Tendencies, Communication Skills And Critical Thinking Of Physiotherapy Students. *CBU International Conference Proceedings*, 7, 711–716. <https://doi.org/10.12955/cbup.v7.1443>
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). United States of America: Lawrence Erlbaum Associates.
- Cotrena, C., Branco, L. D., & Fonseca, R. P. (2017). Adaptation and validation of the Melbourne Decision Making Questionnaire to Brazilian Portuguese. *Trends in Psychiatry and Psychotherapy*, 40, 29–37. <https://doi.org/10.1590/2237-6089-2017-0062>
- de la Fuente-Arias, J. (2015). Competence of Learning, Study and Performance under STRESS (CLSPS) Model. Self-Help Guide for University Students, Graduates and Professional Examination Candidates. *Education & Psychology I+D+I*. Almería, Spain.
- de la Fuente-Arias, J. (2017). Theory of Self- vs. Externally-Regulated Learning(TM): Fundamentals, Evidence, and Applicability. *Frontiers in Psychology*, 8, 1675. <https://doi.org/10.3389/fpsyg.2017.01675>

- Expósito, J. S., Jiménez-Rodríguez, D., Agea, J. L. D., Izquierdo, M. D. C., & Costa, C. L. (2019). Impact of Socio-Emotional Skills On The Performance of Clinical Nursing Practices. *International Journal of Nursing Education Scholarship*, 16(1). <https://doi.org/10.1515/IJNES-2019-0064>
- Filipe, L. P., Alvarez, M.-J., Roberto, M. S., & Ferreira, J. A. (2020). Validation and invariance across age and gender for the Melbourne Decision-Making Questionnaire in a sample of Portuguese adults. *Judgment and Decision Making*, 15(1), 135–148. Retrieved from <http://journal.sjdm.org/19/190917/jdm190917.pdf>
- Foti, R. J., & Hauenstein, N. M. A. (2007). Pattern and variable approaches in leadership emergence and effectiveness. *The Journal of Applied Psychology*, 92(2), 347–355. <https://doi.org/10.1037/0021-9010.92.2.347>
- Garzón-Umerenkova, A., de la Fuente, J., Amate, J., Paoloni, P. V., Fadda, S., & Pérez, J. F. (2018). A linear empirical model of self-regulation on flourishing, health, procrastination, and achievement, among university students. *Frontiers in Psychology*, 9, 536. <https://doi.org/10.3389/fpsyg.2018.00536>
- Garzón-Umerenkova, A., & Flores, J. G. (2017). Propiedades Psicométricas de la Versión en Español de la Prueba Procrastination Assessment Scale-Students, PASS. *Revista Iberoamericana de Diagnóstico y Evaluación-e Avaliação Psicológica*, 1(43), 149-163. [https://doi.org/10.21865/RIDEP43\\_149](https://doi.org/10.21865/RIDEP43_149)
- Gazarian, P. K., Morrison, C. R. C., Lehmann, L. S., Tamir, O., Bates, D. W., & Rozenblum, R. (2021). Patients' and care partners' perspectives on dignity and respect during acute care hospitalization. *Journal of Patient Safety*, 17(5), 392–397. <https://doi.org/10.1097/PTS.0000000000000353>
- Goleman, D. (2001). Emotional intelligence: Issues in paradigm building. In C. Cherniss & D. Goleman (Eds.), *The emotionally intelligent workplace* (p. 26). San Francisco, USA: Jossey-Bass.
- Gordon, M., Hill, E., Stojan, J. N., & Daniel, M. (2018). Educational interventions to improve handover in health care: An updated systematic review. *Academic Medicine*, 93(8), 1234. <https://doi.org/10.1097/ACM.0000000000002236>
- Gustin, L. W. (2017). Compassion for self and others as key aspects of well-being in changing times. *Scandinavian Journal of Caring Sciences*, 31(3), 427–433. <https://doi.org/10.1111/scs.12536>
- Hofstede, S. N., Marang-van de Mheen, P. J., Wentink, M. M., Stiggelbout, A. M., Vleggeert-Lankamp, C. L. A., Vliet Vlieland, T. P. M., & van Bodegom-Vos, L. (2013). Barriers and facilitators to implement shared decision making in multidisciplinary sciatica care: a qualitative study. *Implementation Science : IS*, 8, 95. <https://doi.org/10.1186/1748-5908-8-95>
- Homeyer, S., Hoffmann, W., Hingst, P., Oppermann, R. F., & Dreier-Wolfgramm, A. (2018). Effects of interprofessional education for medical and nursing students: enablers, barriers and expectations for optimizing future interprofessional collaboration - a qualitative study. *BMC Nursing*, 17, 13. <https://doi.org/10.1186/s12912-018-0279-x>
- Ioannidou, F., & Konstantikaki, V. (2008). Empathy and emotional intelligence: What is it really about? *International Journal of Caring Sciences*, 1(3), 118.



- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: a meta-analysis. *The Journal of Applied Psychology*, 87(3), 530–541. <https://doi.org/10.1037/0021-9010.87.3.530>
- Jünger, S., Pestinger, M., Elsner, F., Krumm, N., & Radbruch, L. (2007). Criteria for successful multiprofessional cooperation in palliative care teams. *Palliative Medicine*, 21(4), 347–354. <https://doi.org/10.1177/0269216307078505>
- Kaczmarczyk, J., Davidson, R., Bryden, D., Haselden, S., & Vivekananda-Schmidt, P. (2016). Learning decision making through serious games. *The Clinical Teacher*, 13(4), 277–282. <https://doi.org/10.1111/TCT.12426>
- Kankaraš, M., Feron, E., & Renbarger, R. (2019). *Assessing students' social and emotional skills through triangulation of assessment methods*. (208). <https://doi.org/10.1787/717ad7f2-en>
- Kankaraš, M., & Suarez-Alvarez, J. (2019). *Assessment framework of the OECD Study on Social and Emotional Skills*. (207). <https://doi.org/10.1787/5007adef-en>
- Kryworuchko, J., Strachan, P. H., Nouvet, E., Downar, J., & You, J. J. (2016). Factors influencing communication and decision-making about life-sustaining technology during serious illness: a qualitative study. *BMJ Open*, 6(5), e010451. <https://doi.org/10.1136/bmjopen-2015-010451>
- Mann, L. (1982). *Flinders Decision Making Questionnaires I and II*. The Flinders University of South Australia, School of Social Sciences.
- Mann, L., Burnett, P., Radford, M., & Ford, S. (1997). The Melbourne Decision Making Questionnaire: An instrument for measuring patterns for coping with decisional conflict. *Journal of Behavioral Decision Making*, 10(1), 1–19. [https://doi.org/10.1002/\(SICI\)1099-0771\(199703\)10:1<1::AID-BDM242>3.0.CO;2-X](https://doi.org/10.1002/(SICI)1099-0771(199703)10:1<1::AID-BDM242>3.0.CO;2-X)
- Mauriz, E., Caloca-Amber, S., Córdoba-Murga, L., & Vázquez-Casares, A. M. (2021). Effect of Psychophysiological Stress and Socio-Emotional Competencies on the Clinical Performance of Nursing Students during a Simulation Practice. *International Journal of Environmental Research and Public Health*, 18(10), 5448. <https://doi.org/10.3390/IJERPH18105448>
- Molleman, E., Broekhuis, M., Stoffels, R., & Jaspers, F. (2008). How health care complexity leads to cooperation and affects the autonomy of health care professionals. *Health Care Analysis : HCA : Journal of Health Philosophy and Policy*, 16(4), 329–341. <https://doi.org/10.1007/s10728-007-0080-6>
- Moore, P. M., Rivera, S., Bravo-Soto, G. A., Olivares, C., & Lawrie, T. A. (2018). Communication skills training for healthcare professionals working with people who have cancer. *The Cochrane Database of Systematic Reviews*, 7(7), CD003751. <https://doi.org/10.1002/14651858.CD003751.pub4>
- Morley, L., & Cashell, A. (2017). Collaboration in Health Care. *Journal of Medical Imaging and Radiation Sciences*, 48(2), 207–216. <https://doi.org/10.1016/j.jmir.2017.02.071>
- Moudatsou, M., Stavropoulou, A., Philalithis, A., & Koukouli, S. (2020). The Role of Empathy in Health and Social Care Professionals. *Healthcare (Basel, Switzerland)*, 8(1). <https://doi.org/10.3390/healthcare8010026>

- Noohi, E., Karimi-Noghondar, M., & Haghdoost, A. (2012). Survey of critical thinking and clinical decision making in nursing student of Kerman University. *Iranian Journal of Nursing and Midwifery Research*, 17(6), 440–444.
- O'Daniel, M., & Rosenstein, A. H. (2008). Professional Communication and Team Collaboration. In *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/21328739>
- Pakarinen, A., Parisod, H., Smed, J., & Salanterä, S. (2017). Health game interventions to enhance physical activity self-efficacy of children: a quantitative systematic review. *Journal of Advanced Nursing*, 73(4), 794–811. <https://doi.org/10.1111/jan.13160>
- Palmeira, M., Spassova, G., & Keh, H. T. (2015). Other-serving bias in advice-taking: When advisors receive more credit than blame. *Organizational Behavior and Human Decision Processes*, 130, 13–25. <https://doi.org/10.1016/j.obhdp.2015.06.001>
- Pitel, L., & Mentel, A. (2017). Decision-making styles and subjective performance evaluation of decision-making quality among hospital nurses. *Studia Psychologica*, 59(3), 217. <https://doi.org/10.21909/sp.2017.03.742>
- Rahaman, H. M. S. (2014). Personality and decision making styles of university students. *Journal of the Indian Academy of Applied Psychology*, 40(1), 138.
- Ribeiro, L., Severo, M., & Ferreira, M. A. (2016). Performance of a core of transversal skills: self-perceptions of undergraduate medical students. *BMC Medical Education*, 16, 18. <https://doi.org/10.1186/s12909-016-0527-2>
- Rodríguez-Nogueira, Ó., Moreno-Poyato, A. R., Álvarez-Álvarez, M. J., & Pinto-Carral, A. (2020). Significant socio-emotional learning and improvement of empathy in physiotherapy students through service learning methodology: A mixed methods research. *Nurse Education Today*, 90, 104437. <https://doi.org/10.1016/j.nedt.2020.104437>
- Rodríguez, G., Díez, J., Pérez, N., Baños, J. E., & Carrió, M. (2019). Flipped classroom: Fostering creative skills in undergraduate students of health sciences. *Thinking Skills and Creativity*, 33, 100575. <https://doi.org/10.1016/J.TSC.2019.100575>
- Royce, C. S., Hayes, M. M., & Schwartzstein, R. M. (2019). Teaching Critical Thinking: A Case for Instruction in Cognitive Biases to Reduce Diagnostic Errors and Improve Patient Safety. *Academic Medicine*, 94(2), 187–194. <https://doi.org/10.1097/ACM.0000000000002518>
- Scott, G., Leritz, L. E., & Mumford, M. D. (2004). The effectiveness of creativity training: A quantitative review. *Creativity Research Journal*, 16(4), 361–388. <https://doi.org/10.1080/10400410409534549>
- Singh, J., & Salisbury, H. (2019). Attitudes and Perceptions of Non- Clinical Health Care Students Towards Interprofessional Learning. *Health, Interprofessional Practice and Education*, 3(4), eP1179. <https://doi.org/10.7710/2159-1253.1179>
- Soukup, T., Lamb, B. W., Arora, S., Darzi, A., Sevdalis, N., & Green, J. S. (2018). Successful strategies in implementing a multidisciplinary team working in the care of patients with cancer: an overview and synthesis of the available literature. *Journal of Multidisciplinary Healthcare*, 11, 49–61. <https://doi.org/10.2147/JMDH.S117945>

- Steel, P. (2007). The nature of procrastination: a meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, 133(1), 65–94. <https://doi.org/10.1037/0033-2909.133.1.65>
- Uitdewilligen, S., & Waller, M. J. (2018). Information sharing and decision-making in multidisciplinary crisis management teams. *Journal of Organizational Behavior*, 39(6), 731–748. <https://doi.org/10.1002/JOB.2301>
- Wang, R., Shi, N., Bai, J., Zheng, Y., & Zhao, Y. (2015). Implementation and evaluation of an interprofessional simulation-based education program for undergraduate nursing students in operating room nursing education: a randomized controlled trial. *BMC Medical Education*, 15. <https://doi.org/10.1186/S12909-015-0400-8>
- Zavala, A. M., Day, G. E., Plummer, D., & Bamford-Wade, A. (2018). Decision-making under pressure: medical errors in uncertain and dynamic environments. *Australian Health Review : A Publication of the Australian Hospital Association*, 42(4), 395–402. <https://doi.org/10.1071/AH16088>

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## **Using Padlets as E-Portfolios to Enhance Undergraduate Students' Writing Skills and Motivation**

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### **Abstract**

Despite the increasing support for the use of e-portfolios, research on its utility is just beginning to emerge. In terms of the current study, 200 students were asked to create digital portfolios with Padlet, share their e-portfolios via their Virtual Learning Platform (VLE), and ask for peer and lecturer feedback every time they completed a written task. Using a diagnostic test and their final assignment, students had to write a reflective report at the beginning and the end of an academic term. They also interacted every week using a forum created by their lecturer to enhance collaboration and peer support. At the end of each interactive feedback session, they had to reflect on their work and the feedback they received and post their self-reflections on the forum. Findings indicated that students managed to improve their writing performance significantly and enhance their motivation towards writing and learning in general due to this innovative alternative assessment method. This was evident from their final reflective reports, their focus group discussions, and the anonymous feedback they provided through Mentimeter. Students reported that they enjoyed this interactive experience which was both engaging and rewarding. However, students expressed their wish for more support when using IT tools and e-portfolios and asked to be guided to develop their writing and reflective skills and engage even more with their e-portfolios.

*Keywords:* e-portfolios, inclusive assessment, motivation, Padlet, undergraduate students, writing performance

The use of computer-assisted learning is undeniably helpful in making the learning process more effective and meaningful among undergraduate learners in terms of developing their writing and professional skills (Jawaid & Tariq, 2018; Kongsuebchart, & Suppasetseree, 2018). The increasing interest in the use of portfolio assessment emanates from the understanding that it enhances students' learning, facilitates lecturers, improves the assessment process (Yang et al., 2016), promotes self-regulated learning (Tur et al., 2019), improves student motivation (Beckers et al., 2016), and fosters reflection and metacognition (Weber & Myrick, 2018). Barrett (2011) defines an e-portfolio as a collection of evidence of students' learning journey over time which may comprise text, pictures, videos, and students' personal reflections. E-portfolios have been widely adopted as a learning and assessment tool in Europe, the United Kingdom, and the United States (Barrot, 2021). Various studies report that the use of e-portfolios promote reflection and even language learning. In terms of writing pedagogy, researchers claim that e-portfolios facilitate the exchange of peer feedback (Hall & Townsend, 2017). Despite the increasing support and interest for experimentation with e-portfolios, research on its utility is just beginning to emerge (Mapundu & Musara, 2019) especially amidst the COVID-19 crisis.

This article aims to explore whether e-portfolios can be used to improve undergraduate students' writing performance and motivation in Higher Education Institutions (HEI) since research in the use of Padlets as e-portfolios with undergraduate students is scarce in that context. The study intends to address the following research questions:

1. What is the impact of Padlets, when used as e-portfolios, on undergraduate students' writing performance?
2. What are undergraduate students' perceptions of the impact of Padlets, when used as e-portfolios, on their writing performance?
3. What are undergraduate students' perceptions of the impact of Padlets, when used as e-portfolios, on their motivation?

First, the recent literature regarding the use of e-portfolios to enhance undergraduate students' writing proficiency and motivation will be presented to identify potential gaps in the literature. Then, the methodology of the study and its outcomes will be thoroughly explored and discussed. Eventually, conclusions will be presented, the limitations of the study will be examined and suggestions for future research as well as recommendations for the successful implementation of e-portfolios in undergraduate education will be proposed.

## **Literature Review**

### **The Impact of Padlets on Students' Writing Skills**

Padlet is a valuable device-agnostic tool for interaction on virtual wall that allows students to express their views on a specific topic more easily (Jaganathan, 2016). It can be used as an online paper sheet on which learners can post any kind of content (e.g., pictures, videos, and text) anywhere on this page and can be accessed by many users from various devices, such as, laptop, desktop, tablet, or smartphone. Padlets enhance students' motivation and creativity as they allow them to take part in various collaborative activities safely (Fuchs, 2014). However, some researchers report that it can lead to cheating and may seem monotonous for some learners (Wulandari, 2018).

There are several studies that have used e-portfolios in HEI but only one that has used Padlets to enhance undergraduate students' learning. Song (2021) used Padlets as e-portfolios in terms

of a module in a Polytechnic in Singapore to evaluate its effectiveness through 226 students' perceptions using a survey. Findings indicated that Padlets could enhance learners' autonomous learning if students were carefully scaffolded and supported throughout the implementation. This quantitative study highlights the need for qualitative studies which could present the benefits and challenges of using e-portfolios with undergraduate students. The current study intends to examine students' perceived ease of use and usefulness, their inclinations to use this technological tool as well as their perspectives while experimenting with it.

Kongsuebchart and Suppasetseree (2018), who investigated the effects of a Weblog-based e-portfolio on the English writing skills of forty-five Thai EFL undergraduate students reported significant improvement of students' writing skills and participants' positive opinions towards e-portfolios. However, they stressed that a prerequisite for the successful use of e-portfolios is for all students to have a reliable Internet connection and suitable technology for learning. The current study intends to explore the challenges of using e-portfolios with undergraduate students in a European country as a means of improving their writing skills to compare findings.

Furthermore, Ngui et al. (2020) explored the impact of implementing e-portfolios at a public university in Malaysia and concluded that it contributed to the successful enhancement of undergraduate students' writing skills. Students confessed that they improved their writing skills considerably, but the researchers admitted that further research was necessary across other HEI for comparison. They claimed that a comparison of different case studies might additionally reveal more development, strengths and challenges related to e-portfolio use.

Barrot (2019) also examined the effects of Facebook-based e-portfolios on 89 L2 English students' writing performance. The study emphasized the beneficial effects of e-portfolios due to Facebook's interactive features, flexibility, accessibility as well as its ability to expose students to social pressure and increase their audience awareness. However, the researcher highlighted the need for more qualitative data that would explore students' experience in using various online platforms as e-portfolios. These studies could also examine students' psychological dimensions, such as attitudes towards writing or e-portfolios and motivation. Barrot encourages researchers to use interviews or focus group discussions and adds that the use of technology for educational purposes provides a rich area for future investigations. Consequently, it should be treated as one of the core foci of any research agenda on technology-enhanced pedagogy. The current study will further explore some of the areas that Barrot has highlighted in his study.

Finally, Karami et al. (2019) explored Iranian students' perceptions of e-portfolios and their impact on students' writing performance and revealed that e-portfolios had a significant effect on undergraduate students' writing achievement. They highlighted learners' positive attitude towards the use of e-portfolios because of its accessibility, convenience, and the feedback they could receive through it.

### **The Impact of Padlets on Students' Motivation**

The current study also intended to examine whether the use of Padlets as e-portfolios with undergraduate students could enhance their motivation and autonomy as learners. The use of Padlets as e-portfolios have never been explored before, to the knowledge of the present researcher.



E-portfolio is an “alternative” form of assessment which helps learners develop their autonomy and self-confidence as writers through interaction among each other especially when used in combination with an online learning platform (Marín, 2020; Meihami et al., 2018; Nicholson, 2018). As Chaudhuri and Cabau (2017) point out, helping people become aware of each other’s and one’s own learning fosters increased autonomous life-long learning. Undergraduate students’ willingness to engage with e-portfolios and online learning platforms is going to be explored as very little research has been conducted to examine their attitudes to date (Aygün & Aydın, 2016). A key feature of e-portfolios is that learners interact with each other as they create their e-portfolios, provide feedback to each other, and gain considerable benefits (Oh et al., 2020).

In the constructivist theory, learners should be conscious of their own learning process and develop their metacognitive skills so that they can control and evaluate their learning process on their own. The social constructivist perspective on learning puts the learner at the centre of the teaching, learning and assessment process, and the metacognitive functions are deemed as crucial as learners should be able to build accorded new knowledge on their own (Hussain & Al Saadi, 2019). Nicol and Milligan (2006) propose principles for effective formative feedback through alternative assessment methods such as e-portfolios which aim to enhance learning. They claim that formative feedback should focus on self-regulation as learners need to set goals and plan strategies to achieve them, manage their resources, and try to achieve their goals. They also focus on learners’ critical appraisal (Nicol et al., 2014) and problem-solving skills (Hwang et al., 2014). In terms of the present research study, undergraduate students’ perceptions of the ways in which e-portfolios may enhance their learning will be explored to supplement the existing literature.

E-portfolio, one of the most prominent forms of formative assessment, helps learners develop various learning strategies by fostering co-operative learning and self-management which is a hidden benefit of engaging the learner in his/her learning process (Cabau, 2017). Through self- and other-regulation which are fostered as students engage in e-portfolios, certain learning processes which were in a state of development may have had an opportunity to mature and consolidate, and new knowledge may have been generated (Segaran & Hasim, 2021; Lei & Chan, 2017).

Rokhsareh et al. (2015) investigated motivational factors of using e-portfolios from undergraduate learners’ perspective. After interviewing 15 students from the chemical engineering, civil engineering, and computing programs, the researchers identified a eight motivational factors, that is, information quality, system quality, consequences of use, learner competence, social norms, positive feedbacks, ownership, and service quality. Since only 15 learners participated in the study, the researcher highlighted the need for future research studies with larger sample size. Addressing that need for studies with more participants, the current study explored 100 undergraduate students’ perceptions of e-portfolios.

In sum, there are several gaps in the literature regarding undergraduate students’ perceptions of the impact of e-portfolios on students’ writing performance and their motivation as learners (Ifinedo, 2017; Yang et al., 2016). Although the use of e-portfolios is associated with numerous benefits in relation to student writing performance (Aygün & Aydın, 2016) and motivation (Ciesielkiewicz, 2019), more research is needed to provide insights on undergraduate students’ attitudes towards e-portfolios. The current study aimed at addressing various literature gaps using a semi-experimental design, a focus group discussion, and a survey. There is still little

research on how to adapt this approach (e-portfolios) to address the needs of undergraduate students worldwide (Hall & Townsend, 2017).

Consequently, the current study explored the use of e-portfolios as an innovative learning and assessment method with undergraduate students in HEI. The aim was to examine undergraduate students' perceptions of the usefulness of e-portfolios in terms of enhancing students' writing performance and motivation towards learning.

## Methodology

### Participants

The current study engaged 200 students, aged 19-35, in using Padlets to create e-portfolios and interact with each other with the aim of improving their writing skills and motivation as learners for approximately four months (13 weeks in total) in terms of a general Academic Writing Skills Module at the University of Nicosia, Cyprus. The participants formed six mixed-ability groups of local and international students (Table 1). This was their first year at the university and students found writing a rather challenging task. Students had to develop their academic skills in terms of a module which asked them to produce a variety of written tasks and include them in their e-portfolios. Students attended two 60-minute classes per week, used the same material and were taught by the same lecturer who was also the researcher of this study. These students had to present English language qualifications as a pre-requisite to start their degree which classified them as upper intermediate stage (B2) EFL learners according to the Common European Framework of Reference (CEFR) (Council of Europe, 2001). The lecturer asked students to provide anonymous feedback every two to three weeks using Mentimeter. The lecturer also conducted regular group discussions to identify any challenges that the students may have been facing and provide the necessary support. Participation in the discussions and the provision of feedback was optional. The lecturer asked for the students' permission to use their feedback and marks. The students provided their oral consent since the lecturer ensured confidentiality and anonymity of their responses. The lecturer also informed the University and was granted their approval.

**Table 1**

*Demographic Details and Characteristics of Participating Students*

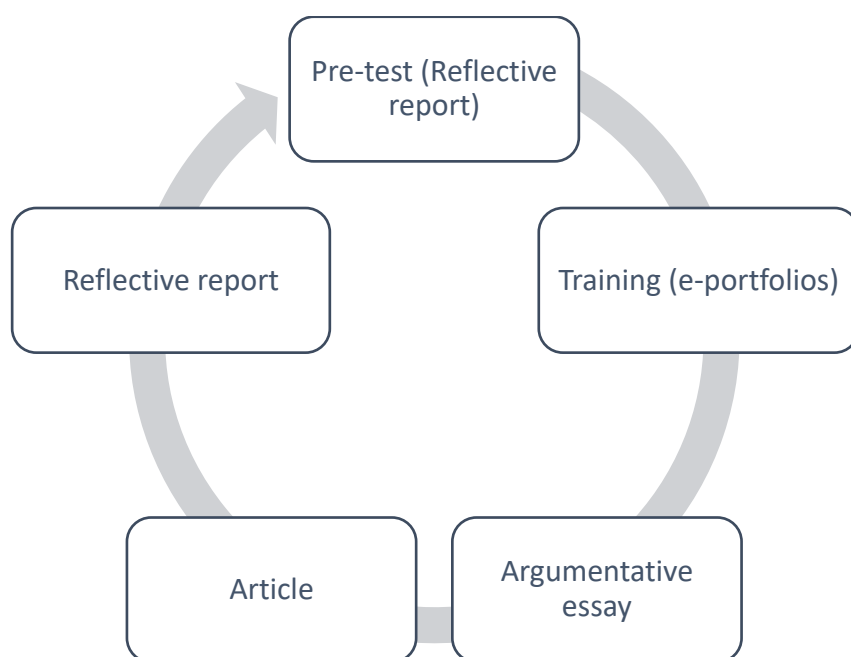
	Students	Frequency
<b>Gender</b>	Male	76
	Female	124
<b>Class rank</b>	High-achievers	14
	Medium-achievers	118
	Low-achievers	68

### Instruments and Procedure

Students had to write a pre-test which was a reflective report (Figure 1). In that report, they had to reflect on their experiences in terms of writing and assessment so far and discuss those that

had a significant impact on their lives. Students then received training in how to use Padlets as e-portfolios and were given several samples to understand what they should do. They first created a free account and started building their portfolios choosing the background, headings, texts, videos, or pictures they wanted to include which were relevant to the topics and were asked to upload their texts on their portfolios and share the link with their lecturer and peers asking for feedback. In terms of this module, students had to develop their writing skills. Students received instruction regarding report writing and were asked to prepare a report choosing one topic from the five provided by the lecturer i.e., the importance of diversity and inclusion. Students uploaded their work on their Padlet and used a forum on their VLE to exchange ideas and share the links of their e-portfolios on Padlet. The module tutor played the role of e-portfolio moderator facilitating students' interaction and engagement, providing input when students made mistakes as they discussed various concepts or deviated from the topic of the main discussion. She even had to play the role of a judge resolving conflicts or misunderstandings.

**Figure 1**  
*Implementation Cycle*



Students received their final mark by the lecturer who provided a mark for all written texts, an argumentative essay, an article and two reflective reports. Students received instruction regarding the different genres (article, essay, report). They also had to write a self-reflective report at the end of the implementation explaining what they have gained from the whole experience and whether they liked it or not and why. Students were also encouraged to offer suggestions for improvement of the e-portfolio implementation. This report served as a post-test and both tests (pre- and post-test) were evaluated taking into consideration the same marking scheme which was prescribed and approved by the University after negotiation of minor elements with the students.

Students invited their peers to provide either written or oral feedback in the form of a short video taking into consideration the marking rubric that was used in terms of this module. The

lecturer negotiated the marking scheme with the students and made some minor changes to allow students to engage even more in the intervention since they felt they owned the assessment criteria as they were able to change them even slightly. They were asked to provide up to five suggestions for improvement and indicate up to five strengths of their peers' texts for two of their peers. To make sure that all students received the same amount of feedback, students could provide feedback on their peers' Padlets on a first comes first served basis. Therefore, once 2 students had provided feedback on one draft, no additional feedback could be provided by other students. They just had to pick another student.

Students explored these topics in the face-to-face setting and online, and based on their conversations, they were asked to provide anonymous feedback addressing three main questions regarding each topic (one topic was covered in two-three weeks) in the form of assignment. The specific questions were: (1) What have you learnt of the topics that we explored? (2) What are your personal perceptions of the issues examined? and, (3) How does the above learning contribute to your development and growth as undergraduate learners? It was determined that the assignments should be between 600 and 700 words. All these data were utilized to answer all research questions. Students had also to post their views (50 words) related to discussions during the lectures and tutorials.

Students were promised to get 10% of the overall marks as a kind of reward if they provided kind, honest, detailed, thoughtful and helpful feedback. The lecturer and the author of the text indicated whether they thought the student had really read the text, reflected on it, and provided valuable feedback. Students were provided the same kind of feedback from their peers and lecturer and were then asked to reflect on the feedback and make revisions. They were encouraged to take into consideration only the suggestions that they thought would really help them improve their work.

In terms of exploring students' attitudes, data were collected from students' final reflection essays, the lecturer's field notes from observations and focus group discussions, and students' anonymous feedback through Mentimeter as students were asked to provide feedback regarding the process of the implementation every two to three weeks. The overall aim was to triangulate the data, identify and determine the themes, and establish reliability of the data collected (Nowell et al., 2017). The researcher analysed all data using thematic analysis. (Terry et al., 2017). Data analysis included specifying the units of analysis coding data, sorting codes, and generating themes (Deterding & Waters, 2021). She also had an assistant who analysed 20% of the data which were chosen randomly to enhance the reliability of the analysis. The researcher and the assistant went through 20% of the data and identified recurring themes. They then used a small phrase to describe the theme. They found themes in four categories which will be presented below.

## **Findings and Discussion**

### **Impact on Students' Writing Performance**

The current study explored the impact of e-portfolio assessment on students' writing performance by comparing students post- versus pre-tests. The students had to write a reflective report before and after the implementation. The researcher scored all reports and a second assessor with a PhD in Applied Linguistics, blindly scored 20% of all pre- and post-test reports using the same marking rubric after receiving training on how to rate other students by the researcher. The interrater agreement was 95% and any disagreements were discussed and

resolved between the coders (Belotto, 2018). The outcomes of students' writing pre- and post-tests can be seen in Table 2.

**Table 2**

*Students' Writing Pre- and Post-Test Scores*

		<b>M</b>	<b>SD</b>
Experimental groups	Pre-test	29.88	14.99
	Post-test	54.54	9.95
Control groups	Pre-test	22.88	15.05
	Post-test	25.01	14.79

A paired t-test was conducted to explore experimental groups students' progress and showed that there was a statistically significant difference between students' pre-test ( $M = 29.88$ ,  $SD = 14.99$ ,  $n = 100$ ) and post-test ( $M = 54.54$ ,  $SD = 9.95$ ,  $n = 100$ ) on writing performance ( $t(99) = 23.02$ ,  $p < .05$ ) (Cohen's  $d = 1.93$ ). A similar test was performed for the control groups, and it showed that the difference between students' pre-test ( $M = 22.88$ ,  $SD = 15.05$ ,  $n = 100$ ) and post-test ( $M = 25.01$ ,  $SD = 14.79$ ,  $n = 100$ ) and post-test was not statistically significant ( $t(99) = 1.8$ ,  $p < .05$ ) (Cohen's  $d = 0.14$ ). Cohen's effect size value ( $d = 1.93$ ) suggested a "large" effect size and high practical significance for the experimental groups and a rather "low" effect size ( $d = 0.14$ ) for the control groups.

An independent samples t-test was performed which indicated that students who were involved in the e-portfolio assessment scored higher than student who submitted their work as separate assignments and that this difference in performance was statistically significant  $t(198) = 8.064$ ,  $p = 0.004 < .05$ . Then, a Levene's test was performed in Excel and the p value was  $.004 < .05$  which indicates a violation of the assumption that the variance is equal across the control and experimental groups and indicates that the difference between the variances is statistically significant.

### **Perceived Impact on Students' Writing Skills**

Our study indicated that students appreciated the fact that they could easily store their work and add various elements to make it more attractive to potential readers, i.e., add podcasts. They were able to identify their strengths and weaknesses more easily and check whether they were able to improve their work as one student reports:

*I love the fact that I can always look back at my work and see the progress I have made. I can also have a look at peers' and my lecturers' comments and keep them into consideration when I am writing something new. I also enjoy adding new elements to my e-portfolio i.e., my own podcasts. The whole experience is so engaging and interactive.*

Since peer feedback was used as part of this alternative assessment method that promotes assessment for learning, students were able to engage in a productive dialogue by providing comments and suggestions for improvement to their peers. Students also thought that they were able to develop their linguistic abilities as they were looking for material and ideas, were monitoring their work and engaging with each other's texts. They were also able to develop content knowledge in a variety of fields which would be valuable for the rest of their modules.

Moreover, they seemed more engaged with developing ways in which they could learn more effectively rather than accumulating information and memorizing it as is often the norm at this level. They were able to change their mindsets (Kabilan & Khan, 2012) and become more actively involved in their own learning.

*I was so bored when I was asked to write an assignment and submit it. Several module lecturers ask me to write similar assignments. This is demotivating really. With e-portfolios, I can decide what I want to do and how to do it and add images and videos. I love sharing my work with others and having a look at their work as I can get new ideas which help me improve my writing skills.*

Students were able to produce better and longer texts and improve various aspects of writing, that is, mechanics and grammar. They felt that they could produce more complex sentences and use new vocabulary since they were able to explore various texts and their peers' work as well. One of the students claimed:

*Exams are so boring. We have to memorise a lot of information and just use them during the exam. Nobody remembers anything afterwards. Assignments are also boring as we do not use any creative skills and we do not interact with our peers. In portfolios, students can also include their reflections and allow the lecturer to take them into consideration when he/she marks our assignment. Our lecturer can also detect how he/she can improve his/her teaching practices, what we like and what we hate. As a result, he/she may improve the whole learning procedure.*

Students felt that they could easily monitor their work and gradually improve their academic performance. They could also include aspects of their personality in their portfolios as they were able to combine text with, for example, infographics. As a result, they could engage others to read their texts and they could also re-read and reflect on their work with the aim to increase their writing proficiency through peer and self-assessment (Yang et al., 2016).

Finally, in terms of e-portfolios, the lecturer also stressed the significance of process writing and encouraged students to revise their work reflecting on the feedback they received. Each time, they received feedback on their work, they were asked to check older versions of their work, organise their thoughts and make all necessary changes as they focused on improving different aspects in their writing. As they enhanced their writing skills, students also developed various other professional skills such as reflection and critical thinking.

### **Benefits Related to Students' Motivation**

According to students' feedback, e-portfolios seemed to boost students' motivation as they allowed students' complete development. Students had to combine a variety of skills, for example, creativity, autonomous critical thinking, good judgement, sensitivity, and aesthetic appreciation at the same time as they allow students to use a variety of resources and combine them in unique ways according to their own personality and taste.

*We are bored to death. We either sleep on our desks or play video games during the lectures. We are demotivated as everything is so repetitive. Same assignments for all modules. No possibility of choosing our topic or of doing something more creative. Portfolios are so much more inclusive. Every student has an opportunity to succeed rather than fail. So, no student is left behind.*

Students found e-portfolios extremely interesting and motivating as assessment and learning tools as they seemed to engage more actively and deeply in their own learning, understand what is expected from them and set their own short and long-term goals. Affective assessment provided by peers also enhanced their writing performance and provided additional insights into their own challenges indicating solutions that the lecturer may never have thought of. One of the participants reports:

*I don't mind devoting time while I work on my e-portfolio as I am free to do whatever I want. I love this sense of freedom and personal responsibility as well. I am also flattered when my peers are impressed by my work and ask for suggestions to improve their own e-portfolios.*

Students appreciated the fact that their lecturers could evaluate both the process and the final product and give them credit for their efforts. Lecturers could also intervene, provide additional support and guidance, and praise learners for their efforts. Students believed that e-portfolios were more comprehensive and meaningful since they allowed students to show their efforts and add their personal touch (Jawaid & Tariq, 2018). Finally, e-portfolios allowed students to familiarise themselves with the assessment criteria helping them reflect on their work after receiving multiple feedback.

### **Perceived Challenges Relevant to Students' Writing Skills**

Students claimed that their lecturer had to check peer feedback to make sure students assess each other's work correctly as students expressed some complaints. They reported that the lecturer might also be influenced when students used other interactive material such as videos and pictures in their e-portfolios. Consequently, lectures might provide more marks than they would have if they had assessed the written text only. A student complained that:

*I think my lecturer is unfair. I do not have time to find material to make my e-portfolio more interactive. I think that has an impact on my grade. This is unfair.*

The literature also claims that e-portfolios are often invalid and unreliable (Dune et al., 2018). Students in the current study also detected that some of their peers had a tendency to repeat themselves and paraphrase or even plagiarise as they did not have enough time to spend when working on their portfolios (also in Yang et al., 2016).

### **Perceived Challenges Related to Students' Motivation**

Significant challenges are reported in the literature regarding the reliability of e-portfolios. The assessment criteria should be clear, and e-portfolios should be used in combination with some final examination as students feel that is fairer. Some students have negative attitudes towards this approach as it requires higher involvement, more time spent to improve digital skills (Kongsuebchart & Suppasetseree, 2018) and facing various challenges, i.e., problems with internet connection, facilities, and resources to prepare the material to include in the e-portfolios etc. Time constraints that students have is also an issue as well as workload constraints from other modules as a participant indicates:

*I really find it hard to understand the rules of the game and the assessment criteria. Thank God, we also have the final exams. I also find it hard to use e-portfolios without proper guidance and support. I am not proud of my digital skills. I need help.*

Unreliable internet connection or software issues may hinder students as they try to engage in online discussion in the fora and they might lose unsaved work or be unable to post their contributions to online discussions. This is a very frustrating experience for students, but the recent COVID-19 pandemic has taught people to be more patient and resourceful. Few mature students also described their own challenges:

*“I am not good with computers. I do not have the time to develop both my digital and writing skills, not in just 12 weeks. I also find it difficult to understand how Padlets work. They are not that user-friendly.”*

### **Implications**

The current study confirms what was reported in the literature but also indicates several useful implications. For instance, when using e-portfolios, lecturers must ensure that the assessment criteria used are crystal clear to enhance the reliability of the e-portfolio approach (Barrot, 2021). This should be used in conjunction with other summative forms of assessment. However, it should count for at least 50% of the overall final grade to be meaningful for students to engage in it as it is demanding in terms of time and overall effort. Lecturers and module leaders should carefully check the timing of submitting the e-portfolio, arrange sessions for students about paraphrasing and plagiarism providing acceptable and unacceptable example with reasons and strategies to avoid them (Barrett, 2011). They should also train students to work independently and reward them for their efforts. Students should understand why it is important to be able to create an e-portfolio. This can be used for e-branding purposes as they will be looking for a job after their graduation. Lecturers should also allow students to work on a variety of topics to avoid repetition, make sure they engage all learners, provide meaningful feedback and clear suggestions for improvement.

There are also implications for researchers who wish to explore alternative assessment methods even further. The current study has several limitations as it explored the use of e-portfolios with a small number of students in a specific context for only one semester. Future research should be more thorough and explore the use of e-portfolios at a large scale in undergraduate education for a longer time frame. It could also examine its impact on other skills, i.e., oral, and professional skills.

Universities should also make sure that all students are provided with access to the internet, laptops, and any other resources necessary to design and complete their e-portfolios and grant extensions if there are unexpected problems, i.e., inability to join a specific network (Lei et al., 2017). They must provide professional development courses to train their staff in using alternative assessment methods, such as e-portfolios, to help students take responsibility for their own learning and develop various skills necessary to thrive in the current highly competitive world.

There are also implications for undergraduate students who should be less timid and willing to make their e-portfolios available to other people such as family, friends, and employers as they can show the range of skills people may possess, how creative and/or reflective they are and ask for feedback as there is always room for improvement. Another suggestion for improvement would be to try to increase the ways in which students engage in collaboration by designing group e-portfolios and fostering ongoing interaction by using additional resources for example, a group on Facebook or twitter. This would enable more people to get involved in discussions around various topics and contribute their ideas and experiences. In the long



term, these exchanges could help students enrich their e-portfolios, improve their writing skills, increase their motivation as learners and expand their network (Cabau, 2017).

Moreover, taking into consideration the findings of the current study, the implementation of e-portfolios should be more structured so that students could easily understand the rules and follow them (Barrot, 2019). To address ethical issues, there should be frequent supervision of the procedure and open communication as well as severe penalties for academic offenders. E-portfolios allow students to have a voice and express their feelings, ideas, and concerns. These can then be taken into consideration to enhance students' overall experience. A brilliant idea would be to decrease students' burden by allowing them to produce one portfolio for all modules they have every semester or one portfolio for the whole duration of their BA studies. This would allow students to improve their work by interacting with one another and decrease the number of exams and assignments they have focusing on the process as well as the final product.

In sum, the aim of this study was to explore undergraduate learners' perceptions of Padlets when used as e-portfolios and their learning benefits especially in terms of enhancing students' writing skills and attitudes towards learning. Understanding their perspectives can lead to improvements in the implementation of e-portfolios, further the HEI's mission, and ultimately benefit all stakeholders.

### **Conclusion and Recommendations**

The current study explored the use of Padlets as e-portfolios with undergraduate students. Students insisted that they should have clear assessment system (well-developed rubrics with identifiable criteria) explaining expected contribution and participation and that the emphasis should be on the quality rather than quantity of contributions and interaction as e-portfolios need to be directly aligned with their intended purpose. Validity should also be reflected in the focus of evaluation for any decision to be fair and accurate. To increase the reliability of the whole procedure, the focus should be on the process rather than the product by observing students' contribution and overall performance.

Writers' rapid growth was discernible in their e-portfolios, their engagement with the forum and the quality of feedback they provided. However, lecturers should help their students develop a deeper understanding of their expectations as writers, enhance their critical thinking and assessment skills and challenge their existing beliefs about learning. Students should be encouraged to check their peers' e-portfolios and contribute in terms of interactive activities by negotiating meaning and form, identifying problems, and providing solutions and suggestions for improvement of their peers' e-portfolios. They should also exchange points of view in a civilised and constructive way and share ideas which will help their peers grow as writers. Using e-portfolios has helped these learners gradually improve their writing skills in so many ways, that is, by increasing understanding of ways in which they can improve their writing efficacy; enhancing linguistic abilities and improving their so called "soft skills"; improving their content knowledge as regards various topics; developing their digital skills, autonomy and interpersonal skills, and managing to move from a fixed to a growth mindset.

Educators encounter various challenges when implementing e-portfolios as they must train students to develop their critical thinking, reflective and digital skills and develop an openness towards other people's ideas and perceptions. Course leaders should be knowledgeable and experienced when using e-portfolios. They should supervise the whole procedure closely and

intervene to make sure all students reap their benefits. Experienced lecturers can engage learners in interaction, encourage peer learning and promote learning how to learn taking into consideration students' unique character. Students should be trained systematically for a long period and supported by peers and their lecturers. Students gradually learn how to fill their own gaps, organise their ideas and never give up.

The present study has also indicated that other types of assessment can also help in triangulating data from the e-portfolios as continuous assessment is necessary. Lecturers should motivate learners to increase both quality and quantity of their e-portfolios and help them realise their own reasons why they should try to improve their writing skills by engaging actively in the e-portfolio experience. Students should engage in continuous learning and show flexibility in various socio-cultural contexts as they will need to continuously add knowledge and skills to become competitive in the employment market and find a career-enhancing position.

The current study stressed that as students often get confused, each e-portfolio should have a specific aim and help students set their own goals, refine their skills, and reflect on how they can improve. Students can then engage in a variety of ways to improve their work, observe others, critically reflect on their work, try out new things, fail, adapt and be flexible but most of all think critically and grow within a community of learners who help each other to reach their own personal learning goals.

Currently, the advantages and disadvantages of developing e-portfolios from the student perspective have been largely ignored (Aygün & Aydın, 2016). Educators need to understand what aspects of e-portfolios promote learning especially in terms of students' writing skills and enhance their motivation (Ciesielkiewicz, 2019). Therefore, more research and educational projects that utilize e-portfolios as a learning tool are needed to help practitioners have a clearer picture of its benefits in the long run as an alternative assessment method that promotes inclusive learning.

## References

- Aygün, S., & Aydın, S. (2016). The use of e-portfolios in EFL writing: a review of literature. *ELT Research Journal*, 5(3), 205–217.
- Barrett, H. C. (2011). Balancing the two faces of e-portfolios, Education for a digital world: Advice, guidelines, and effective practice from around the globe (2nd Ed.). British Columbia. Retrieved from <https://electronicportfolios.org>
- Barrot, J. S. (2021). Effects of Facebook-based e-portfolio on ESL learners' writing performance. *Language, Culture and Curriculum*, 34(1), 95–111. <https://doi.org/10.1080/07908318.2020.1745822>
- Barrot, J. S. (2019). Facebook as an e-portfolio platform in the EFL/ESL writing classrooms. In S Ballweg & B. Kühn (Eds.), *Portfolioarbeit im kontext von sprachenunterricht*, (pp. 115-130). Universitätsverlag Göttingen.
- Beckers, J., Dolmans, D., & Van Merriënboer, J. (2016). E-portfolios enhancing students' self-directed learning: A systematic review of influencing factors. *Australasian Journal of Educational Technology*, 32(2). <https://doi.org/10.14742/ajet.2528>
- Belotto, M. J. (2018). Data analysis methods for qualitative research: Managing the challenges of coding, interrater reliability, and thematic analysis. *Qualitative Report*, 23(11), 2622–33. <https://doi.org/10.46743/2160-3715/2018.3492>
- Cabau, B. (2017). E-portfolio as a tool to respond higher education ambitions and societal expectations. In T. Chaudhuri & B. Cabau (Eds.), *E-Portfolios in higher education a multidisciplinary approach*, (pp. 141-154): Nature Singapore. [https://doi.org/10.1007/978-981-10-3803-7\\_10](https://doi.org/10.1007/978-981-10-3803-7_10)
- Chaudhuri, T., & Cabau, B. (Eds.). (2017). *E-portfolios in higher education: A multidisciplinary approach*. Springer. <https://doi.org/10.1007/978-981-10-3803-7>
- Ciesielkiewicz, M. (2019). The use of e-portfolios in higher education: From the students' perspective. *Issues in Educational Research*, 29(3), 649–667.
- Council of Europe. (2001). *Common european framework of reference for languages: Learning, teaching, assessment*. Cambridge: Cambridge University Press.
- Deterding, N. M., & Waters, M. C. (2021). Flexible coding of in-depth interviews: A twenty-first-century approach. *Sociological Methods & Research*, 50(2), 708–739. <https://doi.org/10.1177/0049124118799377>
- Dune, T., Crnek-Georgeson, K., Bidewell, J., Firdaus, R., John, J. R., & Arora, A. (2018). Undergraduate health science students' development of reflective practice on communication skills via e-Portfolios. *Journal of University Teaching & Learning Practice*, 15(3), 5. <https://doi.org/10.53761/1.15.3.5>
- Fuchs, B. (2014). *The writing is on the wall: Using padlet for whole-class engagement*. University of Kentucky.
- Hall, J. M., & Townsend, S. D. C. (2017). Using critical incidents and e-portfolios to understand the emergent practice of Japanese student-teachers of English. *Teaching and Teacher Education*, 62, 1–9. <https://doi.org/10.1016/j.tate.2016.10.017>
- Hussain, R. M. R., & Al Saadi, K. K. (2019). Students as designers of E-book for authentic assessment. *Malaysian Journal of Learning and Instruction*, 16(1), 23–48. <https://doi.org/10.32890/mjli2019.16.1.10.32890/mjli2019.16.1.1>

- Hwang, G. J., Hung, C. M., & Chen, N. S. (2014). Improving learning achievements, motivations and problem-solving skills through a peer assessment-based game development approach. *Educational Technology Research and Development*, 62(2), 129–145. <https://doi.org/10.1007/s11423-013-9320-7>
- Ifinedo, P. (2017). Students' perceived impact of learning and satisfaction with blogs. *The International Journal of Information and Learning Technology*. 72, 189–199. doi:10.1016/j.chb.2016.12.049.
- Jaganathan, S. (2016). Edmodo and Padlet as a collaborate online tool in enriching writing skills in language learning and teaching. Accessed from [https://www.researchgate.net/publication/302472966\\_Edmodo\\_and\\_Padlet\\_as\\_a\\_collaborative\\_online\\_tool\\_in\\_Enriching\\_Writing\\_Skills\\_in\\_Language\\_Learning\\_and\\_Teaching](https://www.researchgate.net/publication/302472966_Edmodo_and_Padlet_as_a_collaborative_online_tool_in_Enriching_Writing_Skills_in_Language_Learning_and_Teaching).
- Jawaid, F. Y. N. A. A., & Tariq, H. J. J. (2018). Challenges to computer assisted language teaching at university level. *International Journal*, 6(2), 188–197.
- Kabilan, M. K., & Khan, M. A. (2012). Assessing pre-service English language teachers' learning using e-portfolios: Benefits, challenges and competencies gained. *Computers & Education*, 58(4), 1007-1020. <https://doi.org/10.1016/j.compedu.2011.11.011>
- Karami, S., Sadighi, F., Bagheri, M. S., & Riasati, M. J. (2019). The impact of application of electronic portfolio on undergraduate English Majors' writing proficiency and their self-regulated learning. *International Journal of Instruction*, 12(1), 1319–1334. <https://doi.org/10.29333/iji.2019.12184a>
- Kongsuebchart, J., & Suppasetseree, S. (2018). The effect of a weblog-based electronic portfolio on Thai EFL undergraduate students' English writing skills. *Computer Assisted Language Learning-Electronic Journal*, 19(2), 28–46.
- Lei, C., & Chan, C. K. (2017). Developing regulation strategies through Computer-supported knowledge building among tertiary students. In C. Lei & Carol K. K. Chan. *Promoting spontaneous use of learning and reasoning strategies*, (pp. 172–192). Routledge. <https://doi.org/10.4324/9781315564029-12>
- Mapundu, M., & Musara, M. (2019). E-Portfolios as a tool to enhance student learning experience and entrepreneurial skills. *South African Journal of Higher Education*, 33(6), 191–214. <https://doi.org/10.20853/33-6-2990>
- Marín, V. I. (2020). Research-based learning in education studies: Design inquiry using group e-portfolios based on blogs. *Australasian Journal of Educational Technology*, 36(1), 1–20. <https://doi.org/10.14742/ajet.4523>
- Meihami, H., Husseini, F., & Sahragard, R. (2018). Portfolio-based writing instruction as a venue to provide corrective feedback on EFL learners' writing performance. *Journal of Modern Research in English Language Studies*, 5(3), 136–119.
- Ngui, W., Pang, V., Hiew, W., & Wah, L. K. (2020). Exploring the impact of e-portfolio on ESL students' writing skills through the lenses of Malaysian undergraduates. *Computer-Assisted Language Learning Electronic Journal*, 21(3), 105–121.
- Nicol, D., & Milligan, C. (2006). Rethinking technology-supported assessment in terms of the seven principles of good feedback practice. In C. Bryan & K. Clegg (Eds.), *Innovative assessment in Higher Education*, (pp. 1–14). London: Routledge.

- Nicol, D., Thomson, A., & Breslin, C. (2014). Rethinking feedback practices in higher education: A peer review perspective. *Assessment & Evaluation in Higher Education*, 39(1), 102–122. <https://doi.org/10.1080/02602938.2013.795518>
- Nicholson, D. T. (2018). Enhancing student engagement through online portfolio assessment. *Practitioner Research in Higher Education*, 11(1), 15–31.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1609406917733847. <https://doi.org/10.1177/1609406917733847>
- Oh, J. E., Chan, Y. K., & Kim, K. V. (2020). Social media and e-portfolios: Impacting design students' motivation through project-based learning. *IAFOR Journal of Education*, 8(3), 41–58. <https://doi.org/10.22492/ije.8.3.03>
- Rokhsareh, M., Azizah, A. R., & Mojib, M. (2015). Electronic portfolio motivational factors from students' perspective: A qualitative study. *Knowledge Management & E-Learning*, 7(2), 265–279. <https://doi.org/10.34105/j.kmel.2015.07.017>
- Segaran, M. K., & Hasim, Z. (2021). Self-regulated learning through e-portfolio: A meta-analysis. *Malaysian Journal of Learning and Instruction*, 18(1), 131–156. <https://doi.org/10.32890/mjli2021.18.1.6>
- Song, B. K. (2021). E-portfolio implementation: Examining learners' perception of usefulness, self-directed learning process and value of learning. *Australasian Journal of Educational Technology*, 37(1), 68–81. <https://doi.org/10.14742/ajet.6126>
- Terry, G., Hayfield, N., Clarke, V., & Braun, V. (2017). Thematic analysis. In C. Willig & W. Stainton Rogers (Eds.), *The sage handbook of qualitative research in Psychology*, 2nd edition (pp. 17–37). London: Sage. <https://doi.org/10.4135/9781526405555.n2>
- Tur, G., Urbina, S., & Forteza, D. (2019). Rubric-based formative assessment in process eportfolio: Towards self-regulated learning. *Digital Education Review*, 35, 18–35.
- Wulandari, R. (2018). *English language education department of a private university students' perception on using Padlet in improving writing skills*. [Unpublished doctoral Dissertation], Universitas Muhammadiyah Yogyakarta.
- Weber, K., & Myrick, K. (2018). Reflecting on reflecting: Summer undergraduate research students' experiences in developing electronic portfolios, a meta-high impact practice. *International Journal of ePortfolio*, 8(1), 13–25.
- Yang, M., Tai, M., & Lim, C. P. (2016). The role of e-portfolios in supporting productive learning. *British Journal of Educational Technology*, 47(6), 1276–1286.

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## **The Code-Switching Phenomenon during Oral Presentations among the Business Programme Students**

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### **Abstract**

In Malaysia, English as a second language is used as a medium of instruction in most institutions of higher learning. Although it is compulsory to use English as a medium of instruction for all academic programmes, code-switching is still prevalent in the classroom for instance during an oral presentation. This phenomenon is also common among the students in the bachelor's degree in International Business (BIB) at a private university in Selangor, Malaysia that became the context of this study. Hence, this research aimed to explore the BIB students' perceptions on the utilisation of code-switching during oral presentations, and to identify the frequency of its usage in their speech. The participants of this study were 203 students from the Faculty of Business Management and Professional Studies (FBMP) of a private university in Selangor, Malaysia, who are currently doing their bachelor's degree in International Business. The research instrument employed was a questionnaire that was accessible through a google form link by all the 203 students. Descriptive statistics were run to analyse the data collected. The findings of this study revealed that the students perceived positively the use of code-switching during oral presentations. Majority of them agreed that they code-switched to overcome their lack of proficiency in English such as limited vocabulary, and to ease their oral presentations. Most of the students admitted they frequently code-switched during oral presentations. From these findings, important implications and recommendations for future research were elucidated.

*Keywords:* code, code-switching, language alternation, oral presentation, second language acquisition



A code denotes a language or a variation of language or rather any kind of system applied for communication (Wardhaugh, 2006). When people choose to communicate, he believes that a specific code (a particular language, dialect, register, style, or variety) must be opted. In speech, more than one code may be used, especially by individuals who have expertise or skills in more than one language. People can and will change from one code to another, as the need arises. This practice is known as code switching. Meyerhoff (2006, p. 116) simplifies the definition by claiming that “code switching is the alteration across sentences or clause boundaries between varieties or codes.” Rodman (2011, p. 461) notes that “code switching is a bilingual-like speech style in which fluent speakers switch languages between or within phrases. As quoted by Alang and Idris (2018), in classrooms around the world, code-switching is still widely practised, particularly where a second language such as English is used as a medium of instruction in the classroom. Similarly, it is a common phenomenon in multilingual communities including Malaysia, which extends from everyday life and work environments to classrooms where a particular language has been developed as the language of instruction (Ting, 2002). Malay, Mandarin, Tamil, and a variety of languages spoken by indigenous groups are among the native languages spoken in Malaysia. Code switching is typical among teachers and learners in the Malaysian ESL classroom because of its usefulness in resolving the potential communication and understanding issues that may arise from the limited language abilities of the learner and the linguistic context of the individual learner (e.g., Auerbach, 1993; Cook, 2001; Carless, 2007; Ellis & Shintani, 2013; Macaro, 2005). Although it works for several purposes in the language classroom, when students use L1 or the native language some teachers or lecturers also feel uneasy or guilty (Butzkamm, 2003).

In higher education institutions, communication in the classroom usually takes place through an oral presentation, which is either between students and students or between a lecturer and students. Educators or lecturers utilise almost entirely oral presentations when giving their lessons in front of the class. An oral presentation has also become a part of the assessment for students as they are required to present their work. In oral presentations, the students occasionally switch their language when delivering information about their assignments and projects. Past research showed that code-switching is perceived as a natural learning process especially in a bilingual academic setting (Cook, 2001). He also recognises that “bilingual or trilingual learners prefer this mode of discussion as they are at ease as they code-switch as they need”.

The role of code-switching in education has been discussed in a growing number of research papers. Nevertheless, students’ and educators’ perceptions towards code-switching are important factors that must be thoroughly considered before using code-switching as a medium of communication as well as an instructional tool. Recently, Alang and Idris (2018) claim that there is a lack of studies looking at university students’ perceptions towards their lecturers’ code-switching practice, particularly in institutions where English is used as the medium of instruction. Moreover, in the current literature, these perceptions are not adequately discussed especially during oral presentation (Selamat, 2014). In the context of the present study, code-switching is also practised among the Faculty of Business Management and Professional Studies (FBMP) students especially during oral presentation. Most subjects at the FBMP require the students to do oral presentation as part of the class learning activities and one important component of their assignment and project. Karimah (2019) denotes that oral presentation in tertiary level education could not be separated from the students. The oral presentations can either be individual or group presentations and the students are expected to clarify the subject-matter during the presentation. This activity is usually followed by a question and answer (Q&A) session. No studies on code-switching related to oral presentations

involving students from a business programme have been conducted so far in Malaysia. Therefore, this present study aims at exploring the Bachelor in International Business (BIB) students' perceptions on the use of code-switching during oral presentations. There are two research questions in this study: (1) What are the perceptions of BIB students on using code-switching during oral presentations? and (2) How frequently do BIB students code-switch in their speech?

### **Literature Review**

Code-switching is a common phenomenon in the classroom especially in Malaysia educational setting. Both students and lecturers typically switch from English to their first language (L1) when the needs arise for them to do so. According to Mokhtar (2015), one of the beliefs is that the use of code-switching in a classroom serves as a method for teaching and learning. He also contends that since 2008, the medium of instruction for Mathematics, Science and technical subjects in university level has changed from Malay to English. In terms of writing, these university lecturers, especially those who are non-English major, may be proficient in English, however they are not used to teaching in English. Thus, they may be less proficient in speaking skill. Therefore, they prefer to code-switch between Malay and English most of the time to solve this problem. However, students are also having a hard time to speak fully in English, hence, they code-switch as well. As this study focuses on Malaysian higher education institution students, it is best to use the word code-switching to refer to the shift and transition, between two languages of English and Malay or Bahasa Melayu as mentioned by Mokhtar (2015).

The phenomenon of language alternation is very much debatable and can be seen based on its pros and cons. According to Üstünel (2016), from affirmatives' point of view, it is agreeable that code-switching helps to integrate the teaching and learning process. Therefore, the notion is viewed as a chance to integrate the right purpose of code-switching rather than the barrier it gives. This is supported by Enama (2016) where she believes that the presence of L1 should be there during language learning as in one framework to avoid problem in utilising L1 because it acts as the right purpose in classroom to students. Moreover, some researchers believe that by having language alternation in interaction would give a great impact to the students in terms of self-efficacy such as their confidence level as well as motivation. As explained by Perego and Boyle (2013), confidence, security, motivation, and friendship are all aided by L1 in the teaching and learning process. L1 use in the EFL classroom finally allows students to be in a relaxed environment where they are free to share their minds without having to adhere to a rigid policy of only speaking English. This environment has prompted the affirmative to have confidence that code-switching is very beneficial for both ends, teachers and students in the classroom.

On the contrary, Sridhar (1996) states that the negative views in the use of code-switching as an act of laziness, sloppiness as well as any other weaknesses during the process of teaching and learning or as mentioned by Brown (2006), lack competency. This conception appears due to the lack of confidence on the use of L1 as the cost it may take. The presence of the L1 would, sadly, shade the goal of language teaching. When compared to a class that utilises English most of the time, the misuse of code-switching will eventually have an impact on students' ability to optimise their use of the English language (Jingxia, 2010). Long-term language alternation often allows errors to be mistaken for normal types of language without the person understanding it. There are always two sides of the coin, and past studies revealed disparities in their findings depending on the contexts and participants of their studies. Hence,

more research especially in the Malaysian educational contexts are beneficial to clear doubts on the need to utilise code-switching in the classroom.

In Malaysia, past literature on code-switching revealed that researchers employed various research designs in their studies – quantitative (e.g., Nordin, Ali, Zubir & Sadjirin, 2013; Alang & Idris, 2018)), qualitative (e.g., Arumugam, Kaur, Supramaniam, & Thayalan, 2017), and mixed method (Mokhtar, 2015; Sardar, Ali Mahdi & Subakir Mohd, 2015; Ariffin & Husin, 2011). Apparently, regardless of the research contexts and participants involved, most of these studies showed that educators and learners have positive attitudes and perceptions on the use of code-switching in the classroom although they may have different motives. Ariffin and Husin (2011) who conducted a study in Malaysian public university where English is used as the medium of instruction for all courses taught, discovered that the presence of code-switching phenomena was connected to the linguistic skills of the educators as well as the students' own, and with the aim of fostering positive learning environment. On the other hand, Sardar, Ali Mahdi, and Subakir Mohd (2015) who utilised questionnaire survey and audio tape recording in their case study, disclosed that Iraqi students in Malaysia primarily used different types of code-switching to claim the identity of the group and because of a lack of English vocabulary. On the other hand, Mokhtar (2015) conducted a study among lecturers and students from an engineering department of polytechnic to discover whether the lecturers' beliefs align with their practices in their daily teaching. He discovered that reiteration and message qualification mechanisms were often used by the lecturers when code-switching and intended mainly to increase their students' comprehension and save time from a long explanation whenever the students are doubtful. The students also viewed that the use of code-switching helped them to understand the lesson better.

Further research that employs quantitative design also supports earlier findings that students have positive attitudes towards the utilization of code-switching in the classroom. For example, Nordin, Ali, Zubir and Sadjirin (2013) performed a survey to identify ESL learner's attitudes on the use of code-switching by English language educators at the university level. The researchers discovered that majority ESL learners have positive attitude towards code-switching, and they also claimed that codeswitching helps them to understand the target language. This is apparently useful for students who do not take English as their major and some of them are prone to code-switching due to their lack of English language (L2) fluency. When they communicate, they tend to alternate from L2 to L1 to convey messages understandably. Nordin et al. (2013) also quoted that when the situation needs the use of the first language in the classroom to encourage students to feel more secure in mastering English, the use of code-switching is appropriate.

Similarly, studies also ascertain students have positive attitudes towards the utilisation of code-switching by their lecturers. A survey conducted by Alang and Idris (2018) involving 45 respondents consisting of diploma students from three different faculties found that lecturers occasionally code-switched for several academic purposes particularly involving difficult words, struggling students, assessment matters and class assignments. The students also perceived positively their lecturers' code-switching practice as they like the class better, they feel more relaxed, and they believe that they obtain more input regarding the subject and improve their achievement. Moreover, the students believe code-switching is necessary to ensure their comprehension of the lesson and to clarify explanation. Hence, they have never misjudged their lecturers' code-switching practice as a sign of language incompetence.

This sense of upstanding feeling towards their lecturers' code-switching practice supports

Krashen's (1982) claim that educators presume students' level of anxiety is lowered if they are allowed to switch to their native language throughout the learning process which indirectly produce stress-free environment. This finding is also supported by Argellan's, Mohammed's and Krishnansamy's (2019) study that involved both 40 international and local students in a class. The results showed that code switching is employed by both teachers and students to function various purposes in ESL classroom. It was found that code exchanging is normally utilised by the educators to encourage and enhance learners' understanding of the target language and to create a more relaxed learning environment. Similarly, code exchanging is utilised by learners as a learning technique to gain clarity of the information conveyed by their lecturers.

The above past studies have revealed that code-switching is an effective classroom instructional and learning approach. This is also supported by Manty and Shah (2017) who conducted a study among 85 TESL undergraduate students, discovered that students have mixed perception towards the use of L1 in English classroom settings. While TESL students tended to use English in English classes, they also realised the value of L1 as a facilitative method to clarify new points, to verify the meanings of words or definitions, and to complete their tasks faster. In addition, due to the belief that the English language is a predominantly educational endeavour, they also recognised the inclination to use L1 as a way of socialising in the English classrooms. Using different participants, Arumugam et. al, (2017) conducted a study among 33 Diploma in Engineering major students. The study employed a qualitative method by conducting a group interview and they discovered that code-switching increased academic discussion in group conversation and provided room for restricted proficient students to achieve a greater understanding of the L2 discussion. Structured interview responses also indicated that their academic discussion and speaking skills were sharpened by the leeway to use L1 in the ESL classroom.

Although many research of code-switching phenomenon share many features, the frequency of code switching is remarkably different (Bakaeva, 2010). This is most likely due to the different contexts where the studies are conducted, and the participants involved. Surprisingly, limited studies have been conducted on the frequency of code-switching among university students especially in the Malaysian context. Some studies anticipate that code-switching is frequently utilised by bilingual speakers in a conversation with other speakers for certain interactional purposes (Shin, 2010; Eldin, 2014; Toribio & Bullock, 2012). In Malaysia, code-switching is also frequently practised by both educators and learners. Ariffin and Husin. (2011) state that the language policy (English as a medium of instruction) at tertiary level was not completely adhered to as code-switching and code-mixing of Bahasa Melayu (L1) and English (L2) are frequently practised by both the educators and learners in the classroom. However, Yazdi and Bakar (2014) who conducted a comparative study on code-switching and willingness to communicate among four pairs of female Iranian and Malaysian students at a private university in Kuala Lumpur found that the Iranians had higher tendency to code-switch to their own language. Thus, there are variations in the code-switching frequency depending on the research contexts and the participants involved.

Evidently, code-switching phenomenon frequently happens among educators and students at both private and public universities. Argellan, Mohammed & Krishnansamy (2019) who conducted a study on code switching phenomenon in English Language classrooms at a private university found that most of their respondents strongly agreed and preferred frequent code switching for communicating knowledge. A qualitative study by Ariffin and Husin (2011) at a public university in Malaysia also revealed that the mixture of Malay (Bahasa

Melayu) and English was a very common practice in most of the lectures. Quite a recent finding by Arumugam, Kaur, Supramaniam and Thayalan's (2017) qualitative study on code switching in ESL speaking class of a public university found that code switching from L2 to L1 was very frequent among the learners and less with the instructor although they have similar L1. Apparently, codeswitching occurs frequently because the learners are not fluent in the target language especially when they feel incompetent or lack confidence in conveying information in the target language (Liebscher & Dailey-O'Cain, 2005). The findings by Barbu, Gillet and Poncelet (2020) indicated that the language-switching frequency is directly linked to interlocutors' cognitive flexibility skills.

Although there are many advantages of code-switching as revealed in past studies, there are also some conflicting views on the need to code-switch. For example, Fareed et al. (2016) claim that some students lamented that the educators' code-switching limits their exposure to English. Regardless of its pros and cons, it is proven by Sardar et al. (2015) that the lack of English vocabulary can lead to code-switching. There are no definite findings on learners' attitudes and perceptions towards the employment of code-switching in the classroom. There is still a lack of research in this field of research (Alang & Idris, 2018) especially in Malaysian contexts. In view of this gap and the urge to find answers for why the BIB students utilise code-switching in the classroom especially during oral presentations even though English is implemented as the medium of instruction, have led to this present research. Therefore, identifying the BIB students' perceptions on code-switching during oral presentations could provide answers for why they code switch; is it due to their lack of English proficiency? Or is it due to their low self-confidence, high anxiety level, and so on?

## **Research Methods**

### **Research Design**

This is a descriptive research design that employs the quantitative research method to gather data and generate analyses of results. The main rationale of employing this design is a large and representative number of samples can be employed to participate in the study. Furthermore, the quantitative research approach applies statistics for the precise measurement of the numeric data (Marczyk, DeMatto, & Festinger, 2005, p. 17) that can positively determine the validity and reliability of the data obtained.

### **Participants**

This study employed convenience sampling method. There were two main justifications for employing this type of non-probability sampling method in this study. First, it was convenient to use during the current Covid-19 pandemic as it enabled the sample to be taken from a group of people who were easy to contact or to reach. Hence, any participants of the targeted population who were available could participate in the study voluntarily. Secondly, this study did not take the respondents' demographic information as its variables, therefore any respondents could participate in the study. The population of this research study comprised of 425 Bachelor in International Business (BIB) students from the Faculty of Business Management and Professional Studies (FBMP) of a private university in Selangor, Malaysia. By applying the precise procedures of Solvin's formula, at 95% of confidence level and considering the margin of error of 5%, the calculation resulted in 203 students were required as the participants for the actual study.

### **Research Instrument**

This study utilised a questionnaire as instrument which was adapted from Al-Qaysi (2016). The questionnaire consisted of three parts: Section A is a demographic of the respondents' details such as gender, age and years of study, Section B (9 items) is about the respondents' perceptions on the use of code-switching during oral presentations and Section C (6 items) is focusing on the frequency of respondents' usage of code-switching in their speech. The 15 items were in Likert-scale format. For Section B, the participants were required to specify their best option from the scale of 1 - 5 (1- Strongly Disagree, 5- Strongly Agree) based on their perceptions regarding code-switching usage in oral presentations and Section C, they were required to state from a scale of 1 - 5 (1- Never, 5- always) for how frequent they code-switch in their speech. A pilot study was conducted using 30 respondents of the actual sample of the study. The result of pilot study revealed that the instrument acquired a good reliability with the Cronbach Alpha of 0.86. Therefore, instrument is reckoned reliable and valid to be employed for the main study's research instrument.

### **Data Collection and Analysis Procedures**

Due to the implementation of Movement Control Order (MCO) by the Malaysian government during the current pandemic, the questionnaire was generated using Google Form and its online link was distributed to the participants through WhatsApp, Instagram, Facebook, and Telegram. This was to ensure that the students could gain access to it. As part of the research ethics, the participants were also required to sign the consent letter that was created together with the questionnaire on google form. The data obtained from the questionnaire was analysed using SPSS (Statistical Package for Social Sciences) version 22.0 software, and the descriptive statistics namely frequency and percentage were employed to identify the perceptions of the BIB students as well as their frequency of code-switching usage during oral presentations in the classroom.

## **Findings**

### **Students' Perceptions towards Code-switching during Oral Presentations**

All the 203 BIB students responded to the questionnaire. There are 9 items in section B that were meant to identify the respondents' perceptions on the use of code-switching during oral presentations. The data was computed using SPSS version 22.0 and analysed using descriptive statistics (frequency and percentage) to generate the results of the study. Table 1 shows the frequency and percentage of the BIB students' perceptions on the use of code-switching during oral presentations.

**Table 1**  
*Students' Perceptions Towards Code-Switching During Oral Presentations*

Items	SD	D	N	A	SA
1) I believe that code-switching enhances my communication skills in oral presentations.	7 (3.4%)	24 (11.8%)	38 (18.7%)	82 (40.4%)	52 (25.6%)
2) I believe code-switching helps me to develop my language skills in oral presentations.	5 (2.5%)	21 (10.3%)	41 (20.2%)	81 (39.9%)	55 (27.1%)
3) I believe that using code-switching shows that I'm well-educated especially in oral presentations.	41 (20.2%)	58 (28.6%)	30 (14.8%)	50 (24.6%)	24 (11.8%)
4) I code-switch because I do not know the word in English (L2)	8 (3.9%)	16 (7.9%)	30 (14.8%)	63 (31%)	86 (42.4%)
5) I found code-switching helps me to convey new words easily.	5 (2.5%)	21 (10.3%)	35 (17.2%)	93 (45.8%)	49 (24.1%)
6) I believe that code-switching makes me feel more comfortable and confident in oral presentations.	7 (3.4%)	23 (11.3%)	33 (16.3%)	89 (43.8%)	51 (25.1%)
7) I found that code-switching allows me to express the ideas that I can't express in other language.	4 (2%)	17 (8.4%)	24 (11.8%)	68 (33.5%)	90 (44.3%)
8) I believe code-switching from the mother tongue (L1) in oral presentations helps me practise the second language that I use.	4 (2%)	25 (12.3%)	43 (21.2%)	83 (40.9%)	48 (23.6%)
9) I believe code-switching allows me to understand better of the content I am presenting.	8 (3.9%)	19 (9.4%)	44 (21.7%)	82 (40.4%)	50 (24.6%)

Based on the results of the analysis above, majority of the BIB students had positive perceptions towards code-switching during oral presentations. A majority agreed that code-switching helped them to convey new words easily (93/45.8%), made them feel more comfortable and confident (89/43.8%), helped them to practise the second language (83/40.9%), allowed them to understand better the content they were presenting (82/40.4%), enhanced their communication skills (82/40.4%), and helped them to develop their language skills in oral presentations (81/39.9%). In addition, a majority strongly agreed that code-switching allowed them to express the ideas that they could not express in other language (90/44.3%), and they code-switched because they did not know the word in English (86/42.4%). However, 41 students (20.2%) strongly disagreed and 58 (28.6%) disagreed that code-switching showed that they were well-educated especially in oral presentations.

### **Students' Frequency Rate of Code-switching in a Speech**

There are only six items in section C that concerned students' frequency rate of code-switching in a speech. They were required to rate their frequency use of code-switching based 5 scales: 1- Never, 5- Always. The data was computed using SPSS version 22.0 and analysed using

descriptive statistics (frequency and percentage) to generate the results of the study. Table 2 shows the frequency and percentage of the BIB students' frequency rate of code-switching during oral presentations.

**Table 2**  
*Students' Frequency Rate of Code-switching in a Speech*

Items	Never	Rarely	Sometimes	Often	Always
1) I use code-switching in my daily conversation.	3 (1.5%)	22 (10.8%)	28 (13.8%)	90 (44.3%)	60 (29.6%)
2) I code-switch from English (L2) to my mother tongue (L1) in oral presentations to simplify a theory or concept.	9 (4.4%)	21 (10.3%)	34 (16.7%)	88 (43.3%)	51 (25.1%)
3) I prefer to use more L1 in oral presentations when I do not know the word in English	12 (5.9%)	13 (6.4%)	28 (13.8%)	63 (31%)	87 (42.9%)
4) I use my mother tongue (L1) more in a speech to ensure a smooth presentation.	6 (3%)	25 (12.3%)	32 (15.8%)	93 (45.8%)	47 (23.2%)
5) I code-switch when I am around my friends.	8 (3.9%)	19 (9.4%)	40 (19.7%)	59 (29.1%)	77 (37.9%)
6) I tend to code-switch when I am nervous during oral presentations.	8 (3.9%)	28 (13.8%)	42 (20.7%)	78 (38.4%)	47 (23.2%)

The result of the analysis above shows that majority of the BIB students frequently code-switched during oral presentations. They often code-switched to their mother tongue (L1) in a speech to ensure a smooth presentation (93/45.8%), in their daily conversation (90/44.3%), to simplify a theory or concept (88/43.3%), and when they were feeling nervous or anxious during oral presentations (78/38.4%). Besides that, majority of them always code-switched to L1 during oral presentations when they did not know the word in English (87/42.9%) and when they were around their friends (77/37.9%). Only a small number of between 3 (1.5%) to 12 (5.9%) and between 19 (9.4%) to 28 (13.8%) BIB students had never and rarely code-switched respectively in all the 6 items.

## Discussion

The present study's findings validate the findings of some past studies. Majority of the BIB students perceived positively towards the practice of code-switching during oral presentations. These perceptions can be classified into two categories in terms of the benefits gained when employing code-switching during oral presentations. First, code-switching can overcome students' second language limitations. They approved that code-switching helped them to convey new words easily. Furthermore, majority of the participants strongly agreed that code-switching allowed them to express their ideas that they could not express in other language. These findings align with Argellan et al. (2019) that the absence of at least one word in either dialect can trigger code-switching in a variety of contexts. Thus, the inability to express themselves in English has triggered the students to revert to their L1 during their oral presentation. The inability to express themselves is also associated with the learners' lack of academic vocabulary. This is expressed by Sardar, et. al. (2015) that code-switching often



occurs among students due to having limited vocabulary range. Hence, code-switching has eliminated the learners' language flaws in their oral presentations. They agreed that code-switching from the mother tongue (L1) in oral presentations helped them to practise the second language. Therefore, it helped them to develop their language skills, enabled them to understand better the content they were presenting. It can be concluded from the present study that students can gain many positive benefits from code-switching during oral presentations. Among others, code-switching practice can assist them in developing new vocabulary (Yana & Nugraha, 2019).

Second, utilising code-switching can boost learners' self-esteem. A majority of the students agreed that it made them feel more comfortable and confident in oral presentations and enhanced their communication skills. This reaffirms the finding by Hakim, Arflida, & Satriani, (2019) that code-switching boosts the learners' confidence. Using the first language aids both processes, teaching and learning such as confidence, security, motivation, and friendship (Peregoy & Boyle, 2013). Thus, L1 use in the classroom especially during oral presentations eventually allows students to be in a more relaxed environment (e.g., Ariffin & Husin, 2011; Argellan, Mohammed & Krishnansamy, 2019) where they are free to share their thoughts without having to adhere to a rigid rule of only-speaking-English. In other words, language alternation can intervene in the process of speaking English during oral presentations with conscious intention to ease communication. This finding has led to the affirmative belief that code-switching is beneficial to students especially during oral presentations because of the many advantageous it offered.

This present study's findings also reveal that a majority of the participants frequently code-switched during oral presentations. They always code-switched to L1 i.e., Bahasa Melayu when they did not know the word in English. In addition, they frequently used it to simplify a theory or concept. It can be deduced from these findings that the students resorted to their L1 when they encountered problems in expressing their ideas in English. For example, students may be unable to recall relevant phrases or sentences in the target language, and talk in the target language incorrectly, resulting in communication misunderstandings. Thus, to avoid these mistakes, students frequently code-switch when they do not know certain words when they are doing oral presentations. Hence, this is clear evidence for their deficiency in the second language as Tabassum, Rafique, Akram and Khan (2020) also found that majority of students alter their language code to overcome their incompetency in English language. As explained by Eldridge (1996:305-307), students often have difficulty communicating due to a lack of proficiency in the target language. Besides, according to him, the students switch languages because they feel that they are more comfortable to use one language than the other, thus, they usually shift into the language that they are more proficient in especially when they are anxious. This statement supports the present finding that the respondents frequently code-switched when they were nervous during oral presentations.

A majority of the respondents utilised their first language in a speech most of the time to ensure a smooth presentation. According to Mokhtar (2015), students often take a long time to think about the things they want to say, hence code-switching could save time in oral presentations as well. This denotes that student code-switch to ensure an effective presentation and avoid stuttering in a speech. It enables them to understand the material provided, expand their vocabulary, and make them more interested in interaction in the classroom (Harmilawati, 2018). Although English is the medium of the instruction in the university, the respondents would feel more at ease if they could code-switch when doing a presentation in front of an audience and, at the same time deliver a better presentation without stuttering in a speech due

to limited vocabulary. This is because the way in which one expresses something is equally important although not more essential than the content of one's speech. For instance, if one presented a topic with enthusiasm and clarity, the audience would be more likely to like it than if someone covered more topics but murmured monotonously without clarity from their notes. Thus, the respondents could have frequently code-switched to avoid such circumstances.

However, the high frequency rate of code-switching phenomenon among the respondents is not only prevalent in oral presentations but also in their daily routine. This implies that code-switching has become a habitual phenomenon among these respondents as they also frequently code-switched in their daily conversation and when they were around their friends. This raises a dilemma on whether this strategy should be approved, stopped, or ignored completely by educators in the classroom? The findings of this present study have evoked important implications especially for educators and students in higher learning institutions.

Educators and students alike must be aware of the advantages and disadvantages of employing code-switching in the classroom. It is a beneficial strategy that can be employed in the classroom to ease the learning process. Instead of seeing code-switching as an interfering factor in acquiring a second or perhaps any foreign language, Skiba (1997) proposed that educators regard it as “a system of interconnected languages that students are acquiring.” It is a vital approach for an educational setting as well as for the “communicative competence strategy” (Van Dulm, 2007, p. 15) especially for interpersonal interactions (Faltis, 1989, as quoted by Brice & Roseberry-McKibbin, 2001). Whereas the researcher has noted with this assertion to a large extent, it does not apply to those in other second language classrooms. The present research study had used BIB students who are bilingual and able to speak both languages, Bahasa Melayu (Malay), and English comprehensively. Nevertheless, considering that English will be the most important language in their future field of employment once they graduate, there would be a significant expectation that they should be able to speak fluently in English. Most of this sample will certainly be venturing into professional business-related fields. They will be most likely to face and engage in meetings with more experienced professionals in their workplace and sometimes will be dealing with international clients. Thus, it is imperative that they need to improve their English as well as participate in any related professional development programmes to boost their confidence and communication skills in English.

Another important implication of the present findings is the need for educators and students to practise moderation when employing code-switching in the classroom. The present study indicates that the respondents practised code-switching frequently during formal oral presentations in the classroom. If this habit is not corrected, they may become worse and an irreversible phenomenon. The process of self-correction will be impeded if they continue to seek shortcuts by shifting the second language to the first language rather than making positive efforts to mastering proper English grammar and enhancing their vocabulary. This has raised concern on whether code-switching is really a useful communication technique that students should use in the classroom. This also raises the question of whether permitting the students to freely alternate between their second language and targeted language especially in oral presentation will improve their learning process” (Tiemer, 2004, p. 69). This entails the need for future studies to explore more into this phenomenon. Although there are disadvantages in employing this strategy in the classroom at times, the present study has revealed that it could help the students to ease their communication and boost their self-esteem to convey their message successfully so that the audience could comprehend the contents of their presentations clearly. Besides, code-switching practice can be beneficial to the student's learning and should be employed in the classroom when teaching students with low proficiency in a second

language. However, educators and students must exercise control and it must not be permitted to overwhelm the importance of using the target language especially during oral presentations. Without any form of restraints, this code-switching phenomenon can become an ingrained habit among students that will be difficult to get rid of in the long run.

### **Limitations**

Like any other studies, the present study also has its own limitations. The main limitation is it only involved students from one programme of study that is, the bachelor's in International Business. Thus, the findings may not be generalised to students of other programmes and discourse contexts. Secondly, it only explores about students' perceptions on the use of code-switching in oral presentations in classroom context. Nevertheless, it is envisaged that the findings of the current study would give a meaningful foundation for future researchers to investigate more in-depth studies, perhaps on other aspects of code-switching in other fields too.

### **Recommendations**

Future researchers are recommended to employ a mixed methods research design so that qualitative data can be used to support quantitative data. For example, interviews can be conducted to obtain rich and authentic data from the respondents. Besides, they also can explore into the employment of code-switching in other non-English programmes in their universities with different demographic backgrounds. Apart from exploring code-switching in classroom contexts, we are also passionate to investigate about the utilisation of code-switching in text messages and postings on platforms like WhatsApp, Telegram, Facebook, Instagram, etc. There are many exciting research areas related to code-switching that future research can execute to conduct a more in-depth investigation particularly in the scope of Malaysian contexts.

### **Conclusions**

In conclusion, the participants of the present study perceive positively towards the use of code-switching during oral presentations. They strongly approve that employing code-switching enhances their oral presentations. However, the high frequency of use in code-switching among these bachelor's degree in Internal Business students is mainly due to their second language deficiencies. This has raised a cause of concern on the long-term impact of this phenomenon on their English proficiency. Hence, it is implicated that educators and students alike need to be aware of the advantages and disadvantages of this strategy and it is imperative for them to exercise control and moderation when employing this strategy in the classroom. Even though Malaysians are required to study English for at least eleven years as a part of their formal education, language alternation or code-switching still occurs among tertiary students in the classroom especially during oral presentations. On that note, future researchers in the same discourse community are encouraged to use the findings obtained as a guideline for more impactful future studies.

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## References

- Alang, N., & Idris, S. (2018). Students' perception towards the use of code-switching in teaching and learning. *Journal of Education and Social Sciences*, 11(1), 1–9.
- Al-Qaysi, N. J. (2013). *Examining students' and educators' attitudes towards the use of code-switching within higher educational environments in Oman*. (Master dissertation, The British University in Dubai). Accessed from <https://bspace.buid.ac.ae/bitstream/handle/1234/862/2014101051.pdf?sequence=1&isAllowed=y>
- Argellan, S., Mohammed, L. A. & Krishnansamy, N. (2019). Code switching phenomenon in English language classrooms at the tertiary level. *International Journal of Management and Human Sciences*, 3(1), 35–42.
- Ariffin, K., & Husin, M. S. (2011). Code-switching and code-mixing of English and Bahasa Malaysia in content-based classrooms: Frequency and attitudes. *The Linguistics Journal*, 5(1), 220–247.
- Arumugam, N., Kaur, K., Supramaniam, K., & Thayalan, X. (2017). Code switching in ESL speaking class: How & Why? *Journal of Institutional Research South-East Asia*, 15(1), 121–132.
- Auerbach, E. R. (1993). Re-examining English only in the ESL classroom. *TESOL Quarterly*, 27(1), 9–32. <https://doi.org/10.2307/3586949>
- Bakaeva, N. (2010). A Quantitative Approach to Defining Code-switching Pattern. *Journal of Research in Social Sciences*, 4(3). Retrieved from [https://www.academia.edu/2518120/A\\_quantitative\\_approach\\_to\\_defining\\_code-switching\\_pattern](https://www.academia.edu/2518120/A_quantitative_approach_to_defining_code-switching_pattern)
- Barbu, C-A, Gillet, S. & Poncelet, M. (2020). Investigating the effects of language-switching frequency on attentional and executive functioning in proficient bilinguals. *Frontiers in Psychology*, 11:1078. <https://doi.org/10.3389/fpsyg.2020.01078>
- Brice, A. & Roseberry-McKibbin, C. (2001). Choice of languages in instruction: One language or two? *Teaching Exceptional Children*, 33(4), 10–16. <https://doi.org/10.1177/004005990103300402>
- Brown, H. Douglas. (2006). *Principle of language learning and teaching*. San Francisco. Pearson.
- Butzkamm, W. (2003). We only learn language once. The role of the mother tongue in FL classrooms: death of a dogma. *The Language Learning Journal*, 28(1), 29–39. <https://doi.org/10.1080/09571730385200181>
- Cook, V. (2001). Using the first language in the classroom. *The Canadian Modern Language Review*, 57(3), 402–424.
- Carless, D. (2007). Student use of the mother tongue in the task-based classroom. *ELT Journal*, 62(4), 331–338. <https://doi.org/10.1093/elt/ccm090>
- Eldin, A. A. T. S. (2014). Socio Linguistic Study of Code Switching of the Arabic Language Speakers on Social Networking. *International Journal of English Linguistics*, 4(6), 78–86. <http://dx.doi.org/10.5539/ijel.v4n6p78>
- Eldridge, J. (1996). Code-switching in a Turkish secondary school. *ELT journal*, 50(4), 303–311. <https://doi.org/10.1093/elt/50.4.303>
- Ellis, R., & Shintani, N. (2013). *Exploring language pedagogy through second language acquisition Research*. Accessed from <http://otago.eblib.com.au/patron/FullRecord.aspx?p=1331869>

- Enama, P. R. B. (2016). The impact of English-only and bilingual approaches to EFL instruction on low-achieving bilinguals in Cameroon: An empirical study. *Journal of Language Teaching and Research*, 7(1), 19–30. <http://dx.doi.org/10.17507/jltr.0701.03>
- Faltis, C. J. (1989). Code-switching and bilingual schooling: an examination of Jacobson's new concurrent approach. *Journal of Multilingual and Multicultural Development*, 10(2), 117–127. <https://doi.org/10.1080/01434632.1989.9994368>
- Fareed, M., Humayun, S., & Akhtar, H. (2016). English language teachers' code-switching in class: ESL learners' perceptions. *Journal of Education Social Sciences*, 4(1), 1–11. <https://doi.org/10.20547/jess0411604101>
- Hakim, B. M., Arflida, F. & Satriani, I. (2019). Students' perception towards the use of code-switching use in EFL classroom. *Professional Journal of English Education*. 2(3), 370–375. <https://doi.org/10.22460/project.v2i3.p371-376>.
- Harmilawati, H. (2018). Code-switching on students' group presentation in EFL Classroom. *LS Journal on Interdisciplinary Studies in Humanities*, 297–308. <https://doi.org/10.34050/els-jish.v1i3.4862>
- Jingxia, L. (2010). Teachers' code-switching to the L1 in EFL classroom. *The Open Applied Linguistic Journal*, 3, 10–23. <https://doi.org/10.2174/1874913501003010010>
- Karimah, A. (2019). Students' talk on presentation: The combination of Indonesian affixation and English word. *KnE Social Sciences / International Seminar on Language, Education, and Culture*, 71–76. <https://doi.org/10.18502/kss.v3i10.3889>
- Krashen, S. (1982). *Principles and practice in second language acquisition*: Oxford Pergamon.
- Liebscher G and Daily-O'Cain J (2005). Learner Code-switching in the content-based foreign language classroom. *The Modern Language Journal* [e-journal] 89(2). <https://doi.org/10.1111/j.1540-4781.2005.00277.x>
- Macaro, E. (2005). Codeswitching in the L2 classroom: a communication and learning strategy. In E. Llurda (Ed.), *Non-native language teachers: perceptions, challenges, and contributions to the professions* (pp. 63–84). United States of America: Springer.
- Manty, M. & Shah, P. M. (2017). Students' perception: reasons and opinions on the use of first language in English classrooms. *Journal of Education and Social Sciences*, 7(1), 90–96.
- Marczyk, G., DeMatto, D. & Festinger, D. (2005). *Essentials of research design and methodology*. John Wiley & Sons.
- Meyerhoff, M. (2006). *Introducing Sociolinguistics*. New York: Routledge
- Mokhtar, M. M. (2015). Lecturers' and students' beliefs in code-switching. A Malaysian context. *Teflin Publication Division. TEFLIN Journal*, 26(1), 85–96. <http://dx.doi.org/10.15639/teflinjournal.v26i1/85-96>
- Nordin, N. M., Ali, F. D. R., Zubir, S. I. S. S., & Sadjirin, R. (2013). ESL Learners reactions towards codeswitching in classroom setting. *Procedia-Social and Behavioral Sciences*, 90, 478–487. <https://doi.org/10.1016/j.sbspro.2013.07.117>.
- Peregoy, S. F. & O. F. Boyle. (2013). *Reading, writing and learning in ESL: A resource book for teaching K-12 English learners (6th ed.)*. With contributions by Karen Cadiero-Kaplan. Boston, MA: Pearson
- Sardar, S. S., Ali Mahdi, A. A. & Subakir Mohd, Y. M. (2015) Code-switching in daily conversations among Iraqi students in Malaysia. *Arab World English Journal (AWEJ)*, 6(3), 309–319. <http://doi.org/10.2139/ssrn.2834745>
- Selamat, J. T. (2014). *Code switching in the Malaysian ESL Classroom*. University of Otago.

- Shin, S-Y. 2010. The functions of code-switching in a Korean Sunday School. *Heritage Language Journal*, 7(1), 91–116. <https://doi.org/10.46538/hlj.7.1.5>
- Skiba, R. (1997). Code switching as a countenance of language interference. *The internet TESL journal*, 3(10), 1–6.
- Sridhar, K. (1996). Societal multilingualism. In N.H. Hornberger & S. McKay (Eds.) *Sociolinguistics and language teaching* (pp. 47–70). Cambridge, UK: Cambridge University Press. <https://doi.org/10.1017/CBO9780511551185.005>
- Tabassum, F., Rafique, H., Akram, N. & Khan, M. A. (2020). Functions of code switching in the English language teaching classroom discourse: Perspectives of lecturers and students. *International Journal of English Language and Linguistics Research*, 8(2), 47–65.
- Tierner, W. (2004). *Code-switching repertoires in the language classroom: Contextualization and the enactment of shared perceptions in the talk of language learners*. Retrieved from ProQuest Dissertations and Theses; 2004; ProQuest Dissertations & Theses (PQDT).
- Ting, S.-H. (2002). Is English needed in a Malay workplace? *RELC Journal*, 33(1), 137–153. <https://doi.org/10.1177/003368820203300108>
- Toribio, A. J., & Bullock, B. E. (Eds.). (2012). *The Cambridge handbook of linguistic code-switching*. Cambridge University Press.
- Üstünel, E. (2016). *EFL classroom code-switching*. Turkey: Palgrave Macmillan. <https://doi.org/10.1057/978-1-137-55844-2>
- Van Dulm, O. (2007). *The grammar of English-Afrikaans code switching. A feature checking account*. Doctoral Dissertation. Radboud University, Nijmegen.
- Wardhaugh, R. (2006). *An introduction to sociolinguistics*. Malden, MA: Blackwell Publishing.
- Yana & Nugraha, I. F. (2019). Students' perception on the use of code-switching in English Classroom. *Professional Journal of English Education*. 2(2), 67–73. <https://doi.org/10.22460/project.v2i2.p167-174>
- Yazdi, S. Y. & Bakar, K. A. (2014). An observation account from EFL/ESL dyads: Code-switching and willingness to communicate. *International Journal of Education and Literacy Studies*, 2(1), 82–85. Accessed from <https://www.journals.aiac.org.au/index.php/IJELS/article/view/241>

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