# Navigating Challenges in Postgraduate Pedagogy: An EDI Consideration to Preparing, Designing, and Delivering Teaching by PGRs

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## Abstract

Postgraduate Researchers (PGRs) play an integral role in shaping the pedagogical landscape within Higher Education despite encountering several challenges as they prepare, design, and deliver their teaching. This paper explores these challenges, focusing on the advantages of advancing Equality, Diversity, and Inclusion (EDI) in postgraduate pedagogies. Except for barriers from literature, this paper will also include authors' personal teaching experiences in the module Technology Management for one and a half years.

When PGRs prepare and design for the session, they should be aware of EDI issues since students may have different cultures, knowledge, and personalities. Therefore, it is a challenge to prepare and design the teaching to ensure all students can easily understand, participate equally in the session, and have an equal chance to express or share their thoughts and ideas with others after the session. By addressing this issue, this paper will explain things that PGRs should be concerned about and the challenges they face, such as how they would split students into each group, how they support different students with different characteristics, such as disabilities and how to innovate in the method of teaching, etc.

PGRs should also consider EDI in their teaching practices, which can be more complex than preparing due to unexpected situations that arise during actual practice. Therefore, PGRs should seek to learn from others' teaching experiences and seek support when needed. This paper will illustrate challenges aligned with EDI issues that have been faced, such as arguments between students, sensitive questions asked by students and reports from students, and, more importantly, how to perfectly deliver the knowledge that has been prepared and designed to ensure that students can feel that EDI is also a challenge that PGRs faced.

Keywords: EDI; engagement; classroom environment

## Introduction

In the previous decade, certain challenges have been raised by students who are undertaking postgraduate studies, including concerns related to inequality, intolerance, and limited participation (Hinton et al., 2022). Consequently, an increasing number of universities have begun actively addressing equality, diversity, and inclusion (EDI) matters within postgraduate pedagogy to foster a strong sense of belonging and appreciation among students.

As a response, some educators have embarked on a quest for innovative teaching methods that facilitate full engagement, recognising the vital role such engagement plays in establishing a high-quality learning environment accessible to all students (Messiou et al., 2016). As shown in Table 1, the University of Warwick set goals for improving EDI issues, including the 2030 Plan, social inclusion, participation, race, etc.

	, , , ,
2030 Plan	The strategy is supported by the following strategic
	priorities: Innovation, Inclusion, Regional Leadership,
	Internationalisation, and Sustainability. Moreover, the
	objective is to increase the diversity of staff and students
	to maximise creativity and innovation, develop a culture
	that supports our students and staff to achieve their
	potential and become an internationally recognised leader
	in inclusion.
Social inclusion	The strategy will help Warwick to re-imagine the original
	purpose of setting up the University in 1965, to 'increase
	access to higher education'. Warwick aims to remove
	economic, social and cultural barriers that have prevented
	people from working, studying, and succeeding at
	Warwick.
Widening	In 2022/23, the POLAR Q5: Q1 ratio was 6.6:1 at the
participation	University of Warwick. They are committed to narrowing
	the gap in participation for students to 4:1 by 2025.

Table 1: An example of the University of Warwick EDI plan

Black awarding gap	The black awarding gap was 7.7 percentage points in
	2021/22, which decreased 4.1 percentage points since
	2018/19. They are committed to eliminating the warding
	gap between black and white students by 2025.
National centre for	In July 2023, Warwick launched their new National Centre
research culture	for Research Culture, the first in the UK. The Centre will
	aim to improve research culture across the UK's Higher
	Education sector, providing a hub for knowledge curation,
	training, and innovative research.
Disabled Students	The Disabled Students Code of Practice provides a
Code of Practice	framework for implementing inclusive practice and
	reasonable adjustments to support disabled students. It
	covers inclusive teaching and learning approaches
	through curricula design, delivery, and assessment
	methods.
Improving equality	The university has condensed the EIAs into fewer
impact assessments	questions and included prompts and examples to support
	a meaningful review of potential equality implications.
	We've also added some new guidance on how EIAs fit into
	decision-making processes and when they should be
	completed.

To more deeply understand EDI barriers based on literature and personal experience, this paper will be divided into three parts: designing, preparing, and delivering. The literature was searched with the keywords "Equality", "Diversity", "Inclusion", "Postgraduate pedagogy", "Teaching process", and "Barriers in education" from ProQuest and Warwick University Library. In this paper, "Professional Educational Institutions Theoretical and Practical Basis of Development of the Content of Pedagogical Activity of Teachers of Information and Information Technologies" is mainly used, and all other support documents and literature can be found in Reference.

#### EDI consideration in preparing

The preparation for GTAs serves as an avenue through which Postgraduate Researchers (PGRs) can gain insights into their students. This entails acknowledging the students' diverse backgrounds, knowledge bases, and learning requirements (Tondeur et al., 2019). Nevertheless, it is noteworthy that some educators tend to focus solely on the students' learning experiences. Mansurjonovich (2022) contends that this tendency often arises due to inadequate training, leading to a lack of awareness about EDI among PGRs and students. To effectively prepare for teaching sessions, PGRs must familiarise themselves with the components encompassed by EDI to foster greater awareness in this context.

In the realm of postgraduate pedagogy, "equality" signifies a commitment to affording every student equal opportunity to access, participate in, and benefit from the educational experience. This commitment ensures that no student encounters disadvantages based on their individual circumstances or attributes, such as their backgrounds, identities, abilities, or life situations (Bursuc, 2013). In the context of an inclusive philosophical framework, the term "diversity" takes on a broader scope, encompassing variations in abilities, gender identities, and differences in sociocultural backgrounds (Moriña, 2017). Some individuals also regard race, ethnicity, socioeconomic status, sexual orientation, and geographical location as significant facets of diversity (Dhaliwal et al., 2013). Dhaliwal (2013) further asserts that each Higher Education institution is expected to formulate its distinct definition of diversity, tailored to its unique nature, historical background, mission, traditions, and geographical context. Every student, regardless of their individual distinctions, should be entitled to the right and opportunity for integration into a standard classroom setting. Additionally, they must receive the necessary support to ensure unimpeded access to the learning environment and associated resources (Shyman, 2015).

Drawing from my teaching experience in Technology Management for one and a half years, the preparation for teaching was meticulously organised under the guidance of the course leader, constituting a training process preceding the initial session. During this training session, we were instructed to review students' profiles, which encompassed information such as their gender, race, and student ID, which are crucial for EDI to ensure fair representation, track diversity metrics, and foster an inclusive academic environment. Furthermore, we scrutinised all instructional materials to ensure that the language and examples used were ethical and non-offensive. However, I encountered challenges in gaining comprehensive knowledge about the students before the session commenced. Firstly, the photos in their profiles were uploaded by the students themselves, and some of these images were unclear or digitally altered. To prevent misidentification, certain universities capture photos when students register their student cards. Secondly, the students' nationalities were not listed in their profiles, potentially leading to misunderstandings. For instance, some PGRs might incorrectly assume that all students of Asian descent are from China, while there may be Korean and Japanese students who could feel offended by such assumptions if they are misidentified as Chinese. Therefore, we should not define students based on our judgment before fully understanding them.

## EDI Consideration in designing

When considering design for teaching, many things are included, such as readings, assessments, and activities to "reflect a diverse array of identities and perspectives" (Gannon, 2018). Barriers can arise from the use of exclusionary language and subtle discriminatory comments, often associated with specific characteristics such as race, gender, sexual orientation, religion, age, or disability. These barriers have the potential to discourage engagement and attendance among targeted groups (Harrison & Tanner, 2018). Research by Brescoll (2011) highlights that male voices are often perceived as having greater authority and impact compared to female voices. Hence, it is essential to incorporate gender equality considerations into the design of educational activities. Therefore, we should keep the awareness of gender equality through the readings provided by the university or the gender of the instructor.

Additionally, careful attention should be given to the design of teaching materials and activities to avoid inadvertently offending students based on their language, nationality, or beliefs (Howard, 2019). For instance, avoid perpetuating stereotypes

when using examples in economics or social studies, like portraying certain countries as always impoverished or backwards. Moreover, if discussing religious festivals or rituals, present them in a respectful and accurate manner, avoiding any tone that could be perceived as mocking or dismissive.

Drawing from my teaching experience, I was tasked with organizing students into different groups for various activities. In the course I teach, the majority of students are from the same country or share the same language, especially during the pandemic when the university shifted to online teaching to accommodate students who could not physically attend in the UK. For instance, I conducted two online sessions for students from Hong Kong and Thailand, where the majority were local students, with only a few British students participating. In light of this, ensuring that all students could actively engage in the class was a primary consideration. I made an effort to include at least one British student in each group to promote a diverse learning environment.

Furthermore, I aimed to balance the gender composition within each group. However, I encountered a challenge in both the Hong Kong and Thailand sessions, where the number of male students exceeded that of female students. Achieving a perfect gender balance within each group was not feasible, so I aimed to strike a balance as much as possible. For example, I aimed for a composition of four male students and two or three female students in each group to foster a more equitable distribution.

## EDI Consideration in delivering

The process of delivering a lesson can be more challenging than the initial design phase, primarily because unexpected situations often arise in real-world teaching scenarios (Bragg, 2021). In the classroom, educators may notice that some students face difficulties in grasping the material based on their individual learning backgrounds. While the design phase typically assumes that all students possess similar levels of prior knowledge, the actual progress and depth of understanding may vary among students (Palardy & Rumberger, 2008).

Furthermore, the emotional and psychological well-being of both students and educators can present unexpected challenges during teaching sessions, often influenced by their daily emotional states. Stress, anxiety, and other emotional hurdles can hinder the teaching and learning process (Dewaele, 2011). Therefore, effective teaching goes beyond the mere delivery of pre-designed content; it also involves equipping educators with problem-solving skills to address such challenges (Kozikoglu, 2019).

In my teaching experience, I encountered more barriers than initially anticipated. As mentioned during the design phase, I made an effort to include British students in each group to encourage the sharing of innovative ideas rooted in their cultural and educational backgrounds. However, I was disappointed to observe that most groups were comprised of local students who predominantly used their native language for communication during activities. This linguistic divide made it difficult for the British student to actively participate in the discussions, despite my repeated encouragement to use English. Although this situation is something I had to accept since I cannot control how many British students are in the class, the session's rules can be stricter, such as talking more seriously to non-English speakers to use English during the class.

Additionally, I observed that emotional and psychological issues could significantly impact students during lessons, affecting their concentration, interpersonal communication, and emotional expressions. For instance, I encountered a situation where two students engaged in a heated argument regarding their ideas of the activity during one of my classes. Given the abrupt nature of the argument, I addressed the class, emphasizing the importance of respecting each other's opinions and consciousness. After the session, I spoke individually with the students involved, and they revealed that their argument stemmed from feelings of depression related to their assessments and having had a particularly challenging day. They clarified that they had not intended to offend each other. Based on my experience, GTAs should care about students' emotions and provide suitable help, such as the

university psychological help centre or suggest they contact their personal tutor for further help.

## **Discussion and recommendations**

According to Mcguire and Scott (2006), it's essential for teachers to avoid providing a one-size-fits-all solution and instead employ adaptable strategies that can be customized to meet individual needs. Drawing from insights gleaned from the literature and my personal experiences, I believe that the teaching process can be distilled into three key phases: preparation, design, and delivery.

In the preparation and design stages, PGRs should strive to acquire comprehensive knowledge about their students by collecting students' feedback. This information can then be leveraged to facilitate their active participation in the classroom. Additionally, throughout these phases, it is imperative to remain attuned to factors such as gender, race, nationality, disability, and beliefs. This ongoing awareness of diversity and inclusion is crucial in every step of the teaching process, ensuring that students consistently experience EDI.

Furthermore, the training provided to PGRs should extend beyond the preparation and design stages and also encompass the delivery phase. While unforeseen challenges may arise, course leaders and training teams should share real-world cases and individual experiences to equip PGRs with problem-solving skills. When delivering instruction in the classroom, PGRs must remain vigilant, recognising that new challenges may emerge and require adept handling. As highlighted by Dierking and Fox (2013), delivery should not rigidly adhere to the initial design; instead, teachers should be open to making provisional decisions if they perceive that the planned methods are not suitable in practice. Although GTAs have a limited ability to make these kinds of changes in some contexts, adjusting the approach to activities, literature, or assessments can be a possible solution.

## Conclusion

The concept of EDI is one that should remain at the forefront of our minds to ensure that all students consistently experience a sense of belonging, equality, and understanding. While many schools have embraced EDI initiatives and incorporated them into their educational approaches, in some economically disadvantaged or less developed schools, the full popularization of the EDI concept may still be a work in progress. Furthermore, it's crucial to acknowledge that the challenges related to EDI will evolve over time, reflecting changes in students' circumstances, learning environments, and perspectives. Therefore, those involved in the field of education must continue to play their part in fostering an inclusive environment where every student feels a deep sense of belonging.

## References

Bragg, L.A., Walsh, C. and Heyeres, M., 2021. Successful design and delivery of online professional development for teachers: A systematic review of the literature. Computers & Education, 166, p.104158.

Bursuc, G.C., 2013. Achieving gender equality in teaching and learning: Identifying problems and searching for Solutions. Linguaculture, 4(2), pp.64-73.

Dewaele, J.M., 2011. Reflections on the emotional and psychological aspects of foreign language learning and use. Anglistik: International journal of English studies, 22(1), pp.23-42.

Dhaliwal, J. S., Crane, L. A., & Valley, M. A. (2013). Student Perspectives on the Diversity Climate at a U.S. Medical School: The Need for a Broader Definition of Diversity. BMC Research Notes, 6, 154.

Dierking, R.C. and Fox, R.F., 2013. "Changing the way I teach" building teacher knowledge, confidence, and autonomy. Journal of Teacher Education, 64(2), pp.129-144.

Hinton-Smith, T., Marvell, R., Morris, C. and Brayson, K., 2022. 'It's not something that we think about with regard to curriculum.'Exploring gender and equality awareness in higher education curriculum and pedagogy. Gender and Education, 34(5), pp.495-511.

Howard, T.C., 2019. Why race and culture matter in schools: Closing the achievement gap in America's classrooms. Teachers College Press.

Kozikoglu, I., 2019. Investigating Critical Thinking in Prospective Teachers: Metacognitive Skills, Problem Solving Skills and Academic Self-Efficacy. Journal of Social Studies Education Research, 10(2), pp.111-130.

Mansurjonovich, J.M., 2022. Professional Educational Institutions Theoretical and Practical Basis of Development of the Content of Pedagogical Activity of Teachers of" Information and Information Technologies". Open Access Repository, 9(12), pp.85-89. Palardy, G.J. and Rumberger, R.W., 2008. Teacher effectiveness in first grade: The importance of background qualifications, attitudes, and instructional practices for student learning. Educational evaluation and policy analysis, 30(2), pp.111-140.

Tondeur, J., Scherer, R., Baran, E., Siddiq, F., Valtonen, T. and Sointu, E., 2019. Teacher educators as gatekeepers: Preparing the next generation of teachers for technology integration in education. British Journal of Educational Technology, 50(3), pp.1189-1209.

Wijeratne, D., Dennehy, D., Quinlivan, S., Buckley, L.A., Keighron, C. and Flynn, S., 2022. Learning Without Limits: Identifying the Barriers and Enablers to Equality, Diversity, and Inclusion in IS Education. Journal of Information Systems Education, 33(1), pp.61-74.