

Embedding Student-Centred Active Learning Environment with Upside-down

Pedagogies in teaching practice: What Works for Psychology?

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Abstract

Student-Centred Active Learning Environment with Upside-down Pedagogies (SCALE-UP) is a set of collaborative learning techniques that are shown to reduce the continuation and awarding gaps between students of Black, Asian and other Minority Ethnicities (BAME) and White students when implemented course-wide. The aim of the project was to evaluate the impact of SCALE-UP on a level-four Psychology module consisting of 140 students to inform considerations of wider implementation. Whilst the grades and gaps on this single module did not differ significantly from other modules, students appreciated the authenticity of interactions afforded by SCALE-UP. Staff recognised the growing confidence of their students when expressing their views in class, peer interactions and group activities. These are indicators of the potential benefits that have contributed to closing or removing such gaps in larger scale SCALE-UP implementations.

Keywords: Awarding gap; collaborative learning; ethnicity

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Introduction

The ethnicity awarding gap is widely observed across academic institutions in the United Kingdom (Universities UK, 2019). The ethnicity awarding gap (formerly the ethnicity attainment gap) is defined as the difference between the percentage of students from an ethnic minority group passing with a ‘good honours’ degree (2.1 or first-class degree classification) and that of students from an ethnic majority (White) (Universities UK, 2022). In the UK, the ethnic minority groups are the African-Caribbean diaspora, Asian, mixed-race and other ethnic groups. Although most entrants (>60%) at London South Bank University (LSBU) are from Black and Asian ethnicities (London South Bank University, 2020), the awarding gap since 2016 has remained at around 20 percentage points and 11 percentage points for Black and Asian students, respectively (Figure 1, Office for Students, 2023). The gap is larger still (41%) for part-time students (LSBU, 2018). In the Department of Psychology at LSBU – the subject of this study – the ethnicity awarding gap has ranged from 12% in 2020/21 to 41% in 2019/20 (Figure 2, LSBU 2022, personal communication). The Office for Students has set clear expectations for the sector to address the ethnicity awarding gap as part of the Access and Participation Plan project (Office for Students, 2021).

*** Insert Figures 1 and 2 about here ***

Collaborative learning can improve the awarding gap

Educationalists argue that collaborative learning (CL) among students can play a significant part in achieving a decolonised and anti-racist learning environment (Ono-George, 2019) and reduce the racial awarding gap (Al-Sudani, 2020; Morris et al., 2020). CL is where students work together to achieve shared goals in learning, facilitated by tasks and material provided by their instructor (Loes et al., 2018). CL resonates with the model of constructive alignment developed by Biggs and Tang's (2011) wherein learning is a social process. It encourages the active application of learning (Morris et al., 2020) whilst honing metacognition, structured independent study, peer tutoring, negotiation and innovation (Education Endowment Foundation, 2018; Magen-Nagar & Shonfeld, 2018). Most students find CL a positive experience (Al-Sudani, 2020; Spruin & Abbott, 2017). The Learning to Learn (L2L) initiative in a UK secondary school emphasised proactive learning and social and emotional development resulting in reducing the attainment gap between pupil-premium (socially disadvantaged) students and non-pupil-premium students (Mannion & Mercer, 2016).

Student-Centred Active Learning Environment with Upside-down Pedagogies (SCALE-UP) is a set of CL techniques based on problem-solving (McNeil et al., 2019). SCALE-UP was developed in the USA by Beichner and colleagues (2007) and was shown to improve conceptual understanding, problem-solving ability, attitudes and attendance. Their key finding – that SCALE-UP enabled marginalised students to improve their academic performance – was replicated in a UK study of over 16,000 students when SCALE-UP was applied on three or more modules (60 credits) (McNeil et al., 2019). Three universities, namely Nottingham Trent University, Anglia-Ruskin University and University of Bradford, participated in the study of which University of Bradford has a high proportion (72%) of Black, Asian and Minority

Ethnicity (BAME)¹ students. The study found that the BAME awarding gap reduced from 15.7% to 1.7% at Nottingham Trent University with similar reductions in awarding and continuation gaps for other widening participation groups (Figure 3) (McNeil et al., 2019).

Whilst previous literature provides compelling evidence that SCALE-UP reduces the BAME awarding gap, it does not claim to identify the causal factor in achieving this. The implementation of SCALE-UP consists of many elements that are designed to promote student-centred active learning. One element of SCALE-UP is flipped learning which replaces lectures to focus class time on the application of knowledge gained outside the classroom, active learning and solving problems, thus helping students to develop an appreciation of the real-world application of concepts (Morris et al., 2020). Purposive classrooms with specially designed circular tables and technology, such as one laptop made available for each group of students, have been a feature of implementing SCALE-UP at universities both in the United Kingdom and United States. However, the current study explored the efficacy of applying the approach within the limitations of existing seminar rooms.

Collaborative learning can take many forms. SCALE-UP applies techniques to allow all students to participate fully in group activities. These techniques include forming strategic or ‘mixed ability’ groups where students - one each with a low, middle and high grade, form each group, and having group roles (to increase accountability of all group members). Hierarchical activities encourage deeper understanding from concrete “tangible tasks” to abstract “ponderable tasks”. “Public thinking” refers to sharing and discussing ideas and draft plans to solve a problem

¹ The term ‘Black, Asian and Minority Ethnicity (BAME)’ is problematic because it groups together heterogenous and geographically diverse populations based on skin colour (Khunti et al., 2020) and it arbitrarily dichotomises people (Parry et al., 2023). Nonetheless, the term was used to gather data on the awarding gap.

with the wider group. These techniques can take place in a typical seminar environment without bespoke classroom facilities. However, challenges to delivering SCALE-UP in the original study (McNeil et al., 2019) were that teaching staff underestimated the time it would take to prepare the material and modify the existing session plans. Besides, students on modules that adopted SCALE-UP reported lower satisfaction than traditional modules (McNeil et al., 2019). Reasons included students having mixed feeling about group work.

Analysis of other CL approaches has been shown to address the BAME awarding gap by emphasising the social processes needed to achieve scholastic goals (Magen-Nagar & Shonfeld, 2018). Evidence from LSBU, the focus of the present study, shows that problem-solving group work reduced the BAME awarding gap from 25% in 2015/16 to 0% in 2016/17 on the BSc Forensic Science course at LSBU (Roberts & Griffith, 2020). CL is associated with positive outcomes, such as better overall academic achievement through skills development in communications, group-working, critical thinking, and overall mastery of skills (Education Endowment Foundation, 2018; Kaplowitz et al., 2018; Loes et al., 2018; Morris et al., 2020).

Another benefit of CL is the development of social processes and openness to diversity through discussions with students from different socio-economic and racial backgrounds (Loes et al., 2018). CL not only develops cultural awareness but increases enthusiasm for diversity (de Hei et al., 2020) and reduces cultural prejudices and stereotypes (Magen-Nagar & Shonfeld, 2018). A key technique in SCALE-UP that promotes this is the strategic allocation of students to mixed-ability groups rather than allowing students to form their own groups around existing friendships (McNeil et al., 2019).

CL also empowers students to co-create new knowledge (Kaplowitz et al., 2018; Magen-Nagar & Shonfeld, 2018; Mannion & Mercer, 2016). This involves teachers equipping students

with skills for problem-solving, effective group work and resolving disagreements in achieving shared goals in a structured and constructive way (Magen-Nagar & Shonfeld, 2018; Mannion & Mercer, 2016). This requires a fundamental change in role of teachers that clearly requires support and training for them.

*** Insert Figure 3 about here ***

Aims and objectives

The aim of this project at LSBU was to explore the SCALE-UP approach, determining if (and how) it reduces the BAME awarding gap in an ethnically diverse group of students.

Through the delivery of SCALE-UP-based seminars in a level-4 Psychology module (Semester 2, 2021/22) the objectives were to:-

1. Evaluate the impact on grades of specific groups of students (including BAME) with reference to comparable modules,
2. Understand students' experiences of, and attitudes towards, engaging with SCALE-UP, and
3. Understand staff's experiences of, and attitudes, towards embedding SCALE-UP.

Method

The module selected as the focus for the project was Exploring Real World Psychology (ERWP). This is a core level-4, Semester 2 module worth 40 credits with 140 students enrolled in 2020/21. There are three modules per semester. ERWP was chosen over the other two modules because it was led by RE, the author, who was the co-chair of Equality, Diversity and Inclusion at the Division of Psychology at the time along with PPK, another author. Thus, RE was motivated to pilot SCALE-UP in her module. The other level-4 module is Exploring Psychological Approaches which has a theoretical focus. The third module is Psychological Research Methods which is practice-based and already embeds elements of SCALE-UP, such as problem-based learning and CL. ERWP engages external speakers to deliver 90-minute lectures on how they apply psychology in their field of work with each lecture followed by a two-hour seminar to explore the content further. It was decided that the lectures would be retained in their original format rather than to fully implement the flipped learning element of SCALE-UP. This ensured that delivery matched the broad format marketed to prospective students. Whilst SCALE-UP is especially relevant to such a practical, discursive module, there were concerns that this might make it more difficult to compare ERWP with other, more theoretical modules. Thus, SCALE-UP was implemented in seminars alone.

SCALE-UP training

To support staff in adopting SCALE-UP in their teaching, an external consultant (TC) with experience of training staff in SCALE-UP delivered three training sessions. The first ‘taster’ session was offered to all teaching staff across the School (with 23 attending of whom 19 were female and four were male), regardless of whether they taught on ERWP. This ‘taster’ session

aimed to promote the benefits of SCALE-UP. It explored the three ‘bridges to active, collaborative learning’ - Flipped Learning, Strategic Groupwork and Students as Creators. Staff provided feedback on the session in a survey (Appendix 1A).

The second session specifically targeted the six female hourly-paid lecturers (HPLs, hereinafter referred to as Tutors) who would go on to deliver the seminars in ERWP. HPLs are casually employed teaching staff, often post-graduate students in the same field. One HPL was Black, three were Asian and two were White. This session reprised the principles of SCALE-UP and explained its practical application. The session covered ways to plan SCALE-UP seminars and engage students with the approach. Following an initial exploration, Tutors and the Module Leader worked together to modify the existing seminar materials using SCALE-UP as follows (Appendix 1):-

1. Seminars were redesigned around tasks for students to work in mixed-ability groups of four or five;
2. Broad discussion tasks (i.e., ponderable tasks) used in most seminars were scaffolded by adding tangible and visible tasks (Beichner et al., 2007);
3. Tasks were designed to be carried out by rotating students between specific roles each week, namely *manager*, *sceptic* and *scribe* (Figure 4); and
4. Student groups were expected to upload outputs for each task to a channel on Microsoft Teams and facilitate peer-feedback and peer-learning across the whole class.

Following the implementation of the first four seminars, the Tutors who led seminars took part in a further one-hour feedback session. This session involved Tutors sharing their experiences of SCALE-UP and exploring how to achieve its potential benefits and address any issues. This feedback led to revised session plans for the remaining seminars by adding further

SCALE-UP techniques, such as elements of flipped learning and knowledge checks (i.e., quizzes) to supplement lectures. As with the other training sessions, this feedback session explored the principles of SCALE-UP and applied them in seminar plans.

Data collection

Ethical approval for the study was obtained from the School of Applied Sciences Ethics panel (ETH2122-0149) at London South Bank University. The impact of SCALE-UP on academic performance and the BAME awarding gap was assessed by comparing student grades on ERWP with two other level-4 modules from Semester 1, namely Introducing Real World Psychology (IRWP) and Introducing Psychological Approaches (IPA) (Objective 1).

Teaching staff participating in the initial ‘taster’ session completed a survey about embedding SCALE-UP in their teaching (n=10, Appendix 2A). Students reported their experiences of and attitudes to SCALE-UP (Objective 2), rating their experience of EWRP relative to other modules, through a survey (Appendix 2B). This survey contained closed questions with Likert-scale ratings including items from the ‘Openness to Diversity and Challenge’ scale (Bowman, 2014; Pascarella et al., 1996), coverage of learning outcomes, and satisfaction with group allocations and roles. Further open-ended questions encouraged more in-depth, narrative responses regarding students’ engagement with SCALE-UP including prompts encouraging comparison with other modules.

Tutors delivering the SCALE-UP workshops completed a survey (n=4, Appendix 3C) and provided written feedback of their experiences and attitudes, with comparisons to other modules. Questions encouraged addressing aspects of the SCALE-UP approach, the nature of group interactions and how the seminars helped the students learn key concepts (Objective 3).

Data analysis

The impact of SCALE-UP implementation on the ERWP was assessed as follows:

1. The differences in student's grades between the SCALE-UP module and comparators were analysed based on student ethnicity (Objective 1)
2. The 'Openness to Diversity' scale (Bowman, 2014; Pascarella et al., 1996) and Likert-scale ratings were analysed (Objective 2).
3. A thematic analysis (Braun & Clarke, 2006) was conducted of written feedback from ERWP students (Objective 2) and the staff that delivered it (Objective 3). A researcher (AA) transcribed the responses to each student's responses to open-ended questions in a template, repeating this process for each Tutor's responses (Table 1). The individual responses were studied to identify codes and themes were derived from those codes, guided by the research questions. Another researcher (PPK) reviewed the codes and the organisation of the codes into the themes, suggesting further codes for the responses. PPK performed a similar thematic analysis of the responses from the teaching staff following the first 'taster' session (Table 2).

*** Insert Tables 1 and 2 about here ***

*** Insert Figure 4 about here ***

Results

Feedback from teaching staff on the ‘taster’ session

The effectiveness of any pedagogic innovation depends on the buy-in from staff and their capacity to implement it. Fundamental to achieving those outcomes for this project was that the ‘taster’ session be offered to all staff in the school. Ten of the twenty-three academics who attended the session gave feedback through open-ended questions in a survey.

Most academics appreciated the ‘taster’ session.

“The engaging content and discussion. The facilitator was knowledgeable and passionate about SCALE-UP as a mode of learning. I am now keen to learn more about the topic.”

(Academic member 8)

It was seen as an opportunity to think about teaching, consider different approaches and to gain reassurance of the efficacy of collaborative approaches that academics had tried previously. Most academics welcomed the new ideas, the training on flipped learning, and the encouragement to be more creative. Others were keen to investigate SCALE-UP further.

“[I would like to know] how to implement SCALE-UP in action” (Academic 6)

“There wasn't seemingly enough time (or the session wasn't structured appropriately) to look in depth at the activities students do in the classroom. The tangible, ponderable, and visible activities were covered at an abstract level but with few (any?) concrete examples.” (Academic 8)

Based on such feedback, further opportunities to engage with SCALE-UP were incorporated in the subsequent development sessions.

The fundamental question remained, how would SCALE-UP benefit students? Given the emphasis placed on inclusion and closing ‘unexplained’ awarding gaps, it is perhaps unsurprising that only one academic identified these benefits.

“[The benefits were] learning to be more inclusive; better delivery of teaching and material; better student satisfaction” (Staff member 3)

“I think the content is great but addressing the student engagement issue is important”
(Staff member 4)

Given the familiarity of many of the individual elements, it was not surprising that one academic commented, *“I think we already do better than a SCALE-UP approach”* (Academic 10). However, this does not explain why implementation of SCALE-UP closes ‘unexplained’ continuation and awarding gaps even when compared to courses with significant (but less structured) collaborative elements. Some staff clearly preferred to reserve judgement until they had more information about the approach and further evidence of its efficacy.

Impact on grades and awarding gaps (Objective 1)

Given that this project addressed a single module – rather than multiple modules (60 credits or more) that have been shown to close awarding gaps (McNeil et al., 2019) – and a relatively small number of students ($n=104$), statistically significant changes could not realistically be expected. Comparisons between modules (ERWP vs. IRWP, $F(1, 70) = 3.82$, $p=0.055$, $n = 71$; ERWP vs. IPA, $F(1,95) = 0.95$, $p = 0.332$, $n = 96$) found no differences. Nor were statistically significant differences observed in the grades on the ERWP module between the White group ($n = 57$) and specific ethnic groups – Black ($n = 16$), Asian ($n = 20$) and Other

($n = 11$) (ERWP, $F(3,100) = 1.23, p = 0.303$) (Table 4). Figure 5 compares the percentage of students receiving a 2.1 or higher grade on ERWP compared to IRWP and IPA among BAME students relative to white students. A greater proportion (12%) of Black students, relative to white students, obtained a 2.1 or higher grade on ERWP than IRWP, but a smaller proportion (5%) than IPA. A smaller proportion of Asian students, relative to white students, obtained a 2.1 or higher grade on ERWP than IRWP (25%) and (15%) than IPA.

*** Insert Tables 3 and 4 about here ***

*** Insert Figure 5 about here ***

Feedback from students and Tutors (Objectives 2 and 3)

The 'Openness to Diversity' scale produced relatively high results in terms of mean (S.D.) = 4 (0.77) and median (4 out of 5), exceeding scores in the original US study [mean (S.D.) = 3.75(0.7)] (Loes et al., 2018). However, to draw conclusions from this would require comparable figures for a much larger number of LSBU students including from other modules. The potential contribution of this measure will be explored when a wider project is undertaken. The wider written feedback about the seminars from students and staff produced four broad themes:-

1. SCALE-UP seminars are more enjoyable,
2. SCALE-UP fosters collaboration and positive participation,
3. The SCALE-UP roles were not widely adopted, and
4. The success of SCALE-UP relies on attendance and engagement.

In the following analysis quotations are referenced with the number allocated to the student or Tutor (e.g., Student 11).

Theme 1: SCALE-UP seminars are more enjoyable

Most students and Tutors found the SCALE-UP sessions more enjoyable than the more traditional seminars experienced in the first semester:

These seminars were very enjoyable and helped a great deal in my understanding of the knowledge shown in the lectures. (Student 14)

Students enjoyed the interactive activities and they were engaged which made the seminars more fun...I enjoyed this module and SCALE-UP. (Staff 4)

Students enjoyed the discussions and groupwork and appreciated breaking the seminar down into smaller groups, finding interactive sessions more engaging. Such positive feedback suggests that SCALE-UP emphasizes activities and interactions that students value. The SCALE-UP format appeared to foster stronger peer-group cohesion, supporting group interactions and developing fruitful peer relationships and enhanced the students' understanding of the course material. Social processes are a key factor to achieving academic success, particularly within BAME populations (Magen-Nagar & Shonfeld, 2018)

Students valued the opportunity to share their opinions and personal experiences related to the coursework. Their relationship with their tutors was also strengthened by mutual sharing:

The lessons were more natural and the seminar leader listen [sic] to all the opinions.

(Student 5)

My seminar leader often related what we learnt to their personal experiences, making it easier to understand the content. (Student 21)

Referring to personal experiences can aid learning by relating theory to real-world examples, hearing alternative viewpoints and fostering debate. This has benefits for both BAME and white students, as both groups have proven to demonstrate an increase in openness to diversity when opportunities to converse and share personal stories across cultural boundaries (Loes et al., 2018). A *sense of belonging* in university has been linked to enjoyment, motivation, achievement and retention rates (Bowman, 2014; Pedler et al., 2022).

Three of the four Tutors shared these students' perspective:

The students...seemed to engage really well, particularly when given the opportunity to discuss topics that they could relate to ... sharing personal experiences or real world examples. (Tutor 1).

[SCALE-UP] kept the class active ... [without a] dull moment (Tutor 3).

[The students] seem to really enjoy the teamwork and ... were very engaged with the activities. (Tutor 4)

Most staff considered SCALE-UP sessions to be varied and engaging, making it enjoyable with a sense of personal satisfaction for tutors too. Overall, it was clear that most participants, students and tutors alike, found the SCALE-UP format enjoyable, and the social aspects are likely to lead to increased academic achievement for students, regardless of ethnicity.

Theme 2: SCALE-UP fosters collaboration and positive participation

Of the students responding to the questionnaire, 77% (n=26) agreed that SCALE-UP's group work contributed positively to achieving their learning outcomes:

[SCALE-UP was] more engaging [and] more based on group work. (Student 19)

The seminars delivered since [SCALE-UP] were drastically improved and I felt I learned more in those sessions and had a better understanding of the course material and assignments... The discussion revealed different approaches to certain topics I may not have considered before. (Student 28)

As seen in the previous theme, most students found SCALE-UP, more engaging, valuing the conversation with the class and tutor. Among the ways this increased engagement was achieved was through sessions which were more in-depth and supportive of their understanding of the main lecture content. Students appreciated the benefit of working in groups to increase knowledge and understanding. They also recognized the benefits of increased peer-to-peer interaction that gave students a variety of perspectives, challenged their views (Loes et al., 2018). Students commented that they “*enjoy learning from others*” (Student 29) but also appreciated that these mixed-ability groups reflect how groups form in the workplace (or “*real world*”; Student 10).

Tutors commented on how SCALE-UP demands participation from who might otherwise have remained quiet (Tutors 3 and 4):

It was satisfying to see students engage with one another in class discussions and there was high participation and teamwork as students shared ideas ... The collaborative learning environment enabled active participation between the students ... [who] were empowered to share their thoughts and ideas, giving and receiving feedback and teaching each other with the Tutor acting as a facilitator. (Tutor 3)

Students seemed to gain more confidence sharing their thoughts and ideas as the weeks progressed which could have been a result of having the opportunity to work in small groups. (Tutor 1)

The feedback suggests that SCALE-UP prevents students from being passive learners. There is much compelling evidence that active learning pedagogies are preferable to passive for most students (Michael, 2006), particularly for BAME students (McNeil et al., 2019).

Whilst student feedback was largely positive, there were modest Likert scores on whether the benefits of group work had been fully achieved (three out of five). Some comments on possible improvements suggested that a minority of students were indifferent to group work. It was also argued that class discussions became effective only after the groups became comfortable with each other. This highlights the need for awareness that increased pressure to actively participate in seminars may cause anxiety for some students and scaffolding the group interaction can address this.

Overall, however, most Tutors and students believed that the SCALE-UP was beneficial to learning. They felt that students achieved more with this format than in the seminars from the previous semester, with the benefits derived from the collaborative and interactive aspects that SCALE-UP encourages.

Theme 3: The formal SCALE-UP roles were not fully adopted

A key pedagogical tool in SCALE-UP is having specific group roles that rotate, allowing group work skills to be developed and scaffolded (McNeil et al., 2019). Whilst the roles should be relevant to the discipline studied, Beichner and colleagues (2007) suggested three generic roles – the *manager* who sequences the problem-solving and manages time; the *scribe* who records the process and checks the understanding of group members; and the *sceptic* who ensures alternative approaches are explored and raises concerns with suggested processes (with an additional role of summarizer suggested for larger groups).

These generic roles were adopted for the ERWP but with limited success as shown by mean scores below 3 (on a scale of 1 to 5) for the relevant survey questions:-

How much did you use these roles in your groupwork? M=2.63

To what extent did these roles assist you to participate in your groupwork? M=2.74

How much would you like to see such roles used in future? M=2.50

Some participants valued the roles, suggesting that using them, “...was good and funny” (Student 24), although many groups did not routinely use them:

These roles were confusing and we preferred to not use them. (Student 9)

A further concern was that, in using the roles, the contribution between group members was uneven (Students 3 and 20):

It ended up with one person doing all the work as others did not work as hard. (Student 7).

One of the objectives of the formal roles is to scaffold the engagement of all participants, facilitating equality of contribution. The students generally stated this was not the case. Feedback suggests that they found it challenging to adhere to roles:

Although the roles were useful we didn't always stick to them and preferred to all work together in the roles as one. (Student 14)

I don't really like using these roles, and feel like everyone in the group normally ends up doing a part in every role. (Student 16)

The students generally adopted a more fluid approach than the roles dictated by the SCALE-UP process, whereby every participant takes on one or more aspects of each role or switch roles ad-hoc. Some felt the adoption of roles was inappropriate at a higher-education level; rather than facilitating equal contribution, these students felt that every student the roles fostered unequal

contribution. The previously mentioned survey of Gen Z attitudes to work by Deloitte Global (2022), as well as stating that Gen Z employees want less rigid hierarchies, also places a *sense of meaning* as one of the key reasons a Gen Z employee stays with an employer, and a restrictive role may be seen as less meaningful and satisfactory by this generation. Much feedback suggests that students may not have known how to apply roles, preferring to work together on tasks. There were some indications of a misperception that the adoption of a role by a student was instead of, rather than *parallel* to, the role of an active group participant.

Theme 4: Success of SCALE-UP relies on attendance and engagement

One of the benefits identified in Beichner et al.'s (2007) initial exploration of a course-wide implementation of SCALE-UP was improved attendance. However, attendance has been an issue for many institutions, particularly post-Covid, and LSBU is no exception. Given that SCALE-UP involves allocating students to mixed-ability groups that persist for weeks or even months, attendance is important. In some cases, it was a challenge:

Maintaining the mixed ability groups (particularly when attendance was low) [was challenging] ... Students who regularly attended seemed to engage increasingly well as the sessions progressed. However, there was limited engagement from those who only attended a few seminars. (Tutor 1)

There were so few people in each seminar, there was barely a discussion. This limited how invested students were in the seminar, and no one really participated. (Student 7)

Over 25% of the students ($n = 27$) responding to the survey reported attending six or fewer of the 10 seminars, with a further 18% selecting 'prefer not to say'. Limited attendance can hinder the ability to learn collaboratively and to continue engaging with the lessons, and create a

poorer learning environment for those students who do attend. Collaborative learning requires commitment and good faith from all students.

Given the importance of attendance, perhaps it is unsurprising that Tutors' evaluation of SCALE-UP reflected attendance at their sessions. One of the four tutors' experience of SCALE-UP was demonstrably worse than the others, which the tutor attributed to poor engagement:

SCALE-UP made the seminars a lot harder to run. [There was] a massive lack of engagement...As a Tutor you feel like you are not doing much...I think we need to outline expectations early on, and perhaps include specific training for dealing with quiet groups and layout what we need to do in those situations early on ...it helps to have expectations in order early and be more prepared for these scenarios. (Tutor 2)

Although this tutor referred to engagement rather than attendance, the statistics showed that this tutor's sessions also had the poorest attendance.

One factor influencing student engagement (and possibly attendance) was the randomized group make-up:

[Some students] didn't like the concept of working in pre-allocated groups so their engagement was a lot lower. (Tutor 1)

While most students adapted to their groups well, some students described feeling anxious and awkward at first. Where anxiety led to introversion and decreased engagement in group activities, this led to resentment in their more engaged and outgoing peers. Several students complained about the disparity of effort within their group work, and worried about the possible impact to their grades for graded group work if peers did not pull their weight.

These comments express the need for clear training in overcoming resistance to student engagement. The feedback also explains that the group work poses challenges in ensuring all

group members attend and contribute equally, and that students do not feel disadvantaged by other group members not contributing equally when preparing for their assignments, especially socially anxious students.

Discussion

The aim of this project was to investigate how SCALE-UP could be implemented as a pedagogical approach at LSBU and understand its scope for CL among students, improving academic performance and engaging staff in its delivery.

What works for SCALE-UP in Psychology?

The thematic analysis demonstrated that students typically enjoyed the SCALE-UP-styled ERWP seminars, the subject of this study, more than comparable modules. The scaffolding and structure of SCALE-UP increased student interactivity through group work and whole-class discussions. Students were empowered to share their opinions and relevant personal experiences, and to hear and understand those of their peers outside established friendships. Enjoyment then led to increased engagement and better peer-relationships which in turn led to better learning outcomes. These findings corroborate other reports of enjoyment of CL (Al-Sudani, 2020; Morris et al., 2020). Computer-science students endorsed CL when they were put into strategic groups based on their personality traits and then completed the first stage of their examination in these groups (Al-Sudani, 2020). Students found that working in groups allowed discussions with others, learning other approaches and opinions, collaborating to answer, supporting knowledge gap, and improving teamwork and confidence. Even conversations that are off-topic in problem-based learning group work, such as gossip, can produce natural interactions and build group cohesion (Hendry et al., 2016), and such conversations can enhance CL.

Tutors are instrumental in encouraging such positive peer interactions and group activities. Staff can resolve discrepancies and misunderstanding and even create opportunities for intercultural competence during CL (Al-Sudani, 2020; de Hei et al., 2020). However, Tutors may need extra training in intercultural competence as has been previously noted (de Hei et al., 2020). Students did rate themselves highly on openness to diversity, and this finding supports the goals of CL and its ability to improve intercultural competence (de Hei et al., 2020; Loes et al., 2018). Some elements of SCALE-UP were particularly successful, namely lively group discussions, building peer relationships among students, and Tutors feeling uplifted by watching their students share ideas, learn from each other and progress. It was clear that the growing confidence and enjoyment of students as the ERWP module progressed was rewarding for students and Tutors. ERWP focuses on real-world scenarios, and this element might have created a further avenue for students to apply their learning to their lived experiences. Thus, SCALE-UP can achieve the ambition of CL to sharing goals and reinforce the social processes and help to achieve scholastic goals (Biggs & Tang, 2011; Magen-Nagar & Shonfeld, 2018; Spruin & Abbott, 2017).

Another aim was to determine whether SCALE-UP reduces the BAME awarding gap as reported in a study of over 16,000 students (McNeil et al., 2019). However, the breadth of the intervention for the current study at LSBU was insufficient to yield statistically significant differences between ethnic groups in terms of the awarding gap. McNeil and colleagues (2019) noted greater positive student outcomes when three or modules adopted SCALE-UP within a year in a course. Furthermore, the findings of this study are inconclusive given the small number of participants in each group. Four out of six seminar leaders completed the staff version of the post-module feedback survey, while 30 out of 140 students completed the student version of the

post-module feedback survey. Thus, the views expressed might reflect those who were more engaged. In future, students could be incentivised to complete the survey through research credits or gift vouchers. The attendance waned as the semester progressed as is the case with most modules which might further explain the low student response rate. Nonetheless, the absence of an improvement in the awarding gap does not diminish the importance of CL in reducing the BAME awarding gap (Morris et al., 2020). In theory, CL gives students the opportunity to interact with peers, combating stereotypes arising from White privilege (Earick, 2018; Morris et al., 2020). Even so, students from some ethnic groups could engage in CL more than students from other ethnic groups because of the former groups' access to wider social support (Barhoum & Wood, 2016). Nonetheless, provided it can be delivered effectively, the present study has demonstrated that SCALE-UP could yield a sense of enjoyment and understanding of learning outcomes for most students.

What does not work for SCALE-UP in Psychology?

The biggest barrier to successful delivery of SCALE-UP was low attendance. The module leader (RE) tried to form groups of mixed abilities based on the students' grades from the previous semester. Among the issues raised by poor attendance was that the mixed ability groups had to change from week to week, making it more difficult to establish stable group interactions. Students who attended regularly seemed to be more engaged than students who did not. Fewer students also meant less dynamic discourse in class discussions, with a demonstrable decrease in the engagement and active participation of students who *did* attend when their peers did not. Regular attendance is important for building peer relationships in a multicultural student cohort,

and alongside a multicultural setting it can improve academic engagement and grades (Bijsmans et al., 2022).

The very focus of the seminars on group interaction may have seemed counterintuitive to some and discouraged socially anxious students from attending. Poor attendance of seminars is certainly not unique to ERWP – it is an issue that needs to be addressed by the School, the University and the sector. Regardless, tutors may consider joining groups strategically when attendance is poor, such as a group of less engaged students with a group of engaged ones. Forming mixed ability groups and/or working in groups may affect the mental health of other students who are socially anxious, reluctant to form new peer relationships and prefer to work on their own. Such speculation needs to be investigated in future research. Nonetheless, initial fears may abate as indicated by one student (Results, Theme 2). The post-module survey indicated a moderate satisfaction with being assigned to groups (Appendix 3B). These findings reinforce the benefits of CL because SCALE-UP has shown to reduce progression characteristics on many characteristics besides ethnicity, such as socio-economic status, domicile status, disability and age (McNeil et al., 2019). Adopting such CL even among disciplines with less racial diversity may enable equitable education.

Students may also reject rigid strategies of group formation. A survey by Deloitte Global (2022) concluded that, “*Gen Z’s want workplaces with less rigid hierarchies, where they feel they can speak openly with their employers, and where they can be part of shaping the workplace’s culture*”. We may speculate that this attitude extends also to the classroom. Giving students the choice to form their own groups without adopting rigid roles allows students to position themselves within the context of the topic without the added social pressure to perform (Christensen, 2016). Fixed roles may perpetuate exclusion or rejection (Christensen, 2016). This

may explain the students' rejection of these roles. Some students found that the group roles did not allow everyone to contribute equally. But this may also explain the students' joy and high engagement with group tasks and discussions that appear to value the students' input.

Other barriers to implementation may be staff not knowing how to facilitate a positive group dynamic. One Tutor struggled particularly to engage the students, which suggests that more staff would benefit from training with practical examples of improving dynamics, such as peer observation. Staff need formal training on how to handle quiet students, poorly attended seminars, resolve disagreements and misunderstanding and encourage discussions on openness to diversity (Kaplowitz et al., 2018; Magen-Nagar & Shonfeld, 2018; Mannion & Mercer, 2016). Training the teacher in CL could include resolving disagreements in achieving shared goals in a structured and constructive way and finding creative ways of stirring such group discussions. If the teach could forge such group dynamics, then this could encourage the students to co-create new knowledge (Magen-Nagar & Shonfeld, 2018). The findings suggest that students enjoy having conversations with their Tutors and this was key to student engagement.

Staff who attended the 'taster' session enjoyed the session, with some agreeing to some extent that they would embed it in their teaching (Appendix 2A). Being trained in teaching practices jointly with others encourages cooperation in sharing teaching practices and teachers are more likely to implement the training in their teaching than teachers who are trained individually (Aschermann & Klenzan, 2015).

Recommendations for future research

A limitation of this study was that SCALE-UP was implemented in just one module and so was underpowered to replicate evidence of SCALE-UP reducing the BAME awarding gap.

McNeil and colleagues (2019) found that there were statistically significant improvements in progression and attainment on courses where three or more modules used SCALE-UP. Explicitly talking about cultural diversity in problem-based learning from a subjective stance could allow cultural exchange and new understanding (Bell, 2018) and empower racially minoritized students. This alongside evaluation of SCALE-UP in modules with a greater representation of BAME students could be used to test if SCALE-UP reduces the BAME awarding gap. **Another limitation was that the qualitative data was based on responses to open-ended questions and the responses were often brief rather than detailed. Thematic analysis benefits from rich contextual data in order to develop the themes and extrapolate from them without the risk of becoming speculative.**

Recommendations for adopting SCALE-UP in courses

Based on the study's findings, the following are recommended:-

1. Adopt SCALE-UP to enhance CL, emphasise social processes in learning and empower students to share diverse values,
2. Set a threshold for attendance and combine smaller groups into larger groups,
3. Explain the purpose of the group roles and their possible benefits, such as employability skills, to students to get buy-in,
4. Provide tangible activities in seminar, such as quizzes and puzzles, to reinforce student understanding,
5. Encourage students to keep a record of their seminar activities that they can look back on at the end of the semester and use this portfolio as part of the module assessment.

In conclusion, SCALE-UP enhances student enjoyment of learning of psychology. The active CL through problem-solving of real-world scenarios takes learning to real psychological situations. Tutors must be skilled to facilitate the discussion when misunderstandings arise and reinforce the skills involved in the group roles to students.

Acknowledgement

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Tables

Table 1. Coding of response to open-ended questions from the students and tutors who took part in the SCALE-UP seminars

| Theme | Codes |
|--|---|
| SCALE-UP encourages collaboration and participation | <ul style="list-style-type: none"> • Sharing ideas • Personal experience • Teamwork • Discussions in group or whole class • Challenging preconceptions • Group work / Collaboration / Interactivity |
| Successful SCALE-UP seminars are more enjoyable | <ul style="list-style-type: none"> • Enjoyment • Activities • Variety • Making Friendships |
| Success of SCALE-UP relies on attendance and engagement | <ul style="list-style-type: none"> • Attendance • Engagement / Investment / Participation / Not everyone contributes equally |
| The SCALE-UP roles (manager, scribe, scribe, scribe) were not adhered to | <ul style="list-style-type: none"> • Mixed ability groups; group selection • Fluidity • Structure |

Table 2. Coding of response to open-ended questions from the teaching staff who took part in the ‘taster’ session

| Theme | Codes |
|---|---|
| Sharing ideas and learning new teaching practices | <ul style="list-style-type: none"> • Sharing teaching practices • Reaffirms own teaching practices • Learning/applying new ideas • Revisit own teaching practices • Session was engaging • Trainer expertise • Read about SCALE-UP |
| Training should provide more practical guidance | <ul style="list-style-type: none"> • More practical guidance on SCALE-UP • Look at past seminar plans • Poor content of training material • Structure of training • Timing of training • Worked practical examples |
| Perceived benefits to students | <ul style="list-style-type: none"> • Address student engagement • Student development • Ambivalence about SCALE-UP • Limited benefit of training session • Evidence of impact |

Table 3. Comparison of grades between the module that embedded SCALE-UP and those that did not embed SCALE-UP

| Modules compared | n | Module 1 mean (S.D.) | Module 2 mean (S.D.) | F (df) | <i>p-value</i> |
|------------------|----|-------------------------|-------------------------|--------------|----------------|
| ERWP vs. IRWP | 71 | 53.3 (13.0) | 50.6 (11.9) | 3.82 (1, 70) | 0.055 |
| ERWP vs. IPA | 96 | 53.1 (12.4) | 54.2 (9.6) | 0.95 (1, 95) | 0.332 |

Note: ERWP: Exploring Real World Psychology, the semester 2 module that embedded SCALE-UP; IRWP: Introducing Real World Psychology, a semester 1 modules that did not embed SCALE-UP; IPA: Introducing Psychological Approaches, a semester 1 modules that did not embed SCALE-UP

Table 4. Comparison of grades between different ethnic groups in the module that embedded SCALE-UP and those that did not embed SCALE-UP

| Module | White mean (S.D.) n=57 | Black mean (S.D.) n=16 | Asian mean (S.D.) n=20 | Other mean (S.D.) n=11 | F (df) | <i>p-value</i> |
|--------|------------------------------|------------------------------|------------------------------|------------------------------|--------------|----------------|
| ERWP | 54.8 (12.3) | 51.7 (14.1) | 48.7 (13.3) | 53.1 (8.9) | 1.23 (3,100) | 0.303 |
| IRWP | 51.5 (11.9) | 46.7 (13.0) | 50.5 (12.9) | 52.8 (8.2) | 0.58 (3,67) | 0.632 |

Note: The ethnicity category, 'Other', included students who classified their ethnic background as mixed ethnicity or other. This category also included those who preferred not to disclose their ethnicity

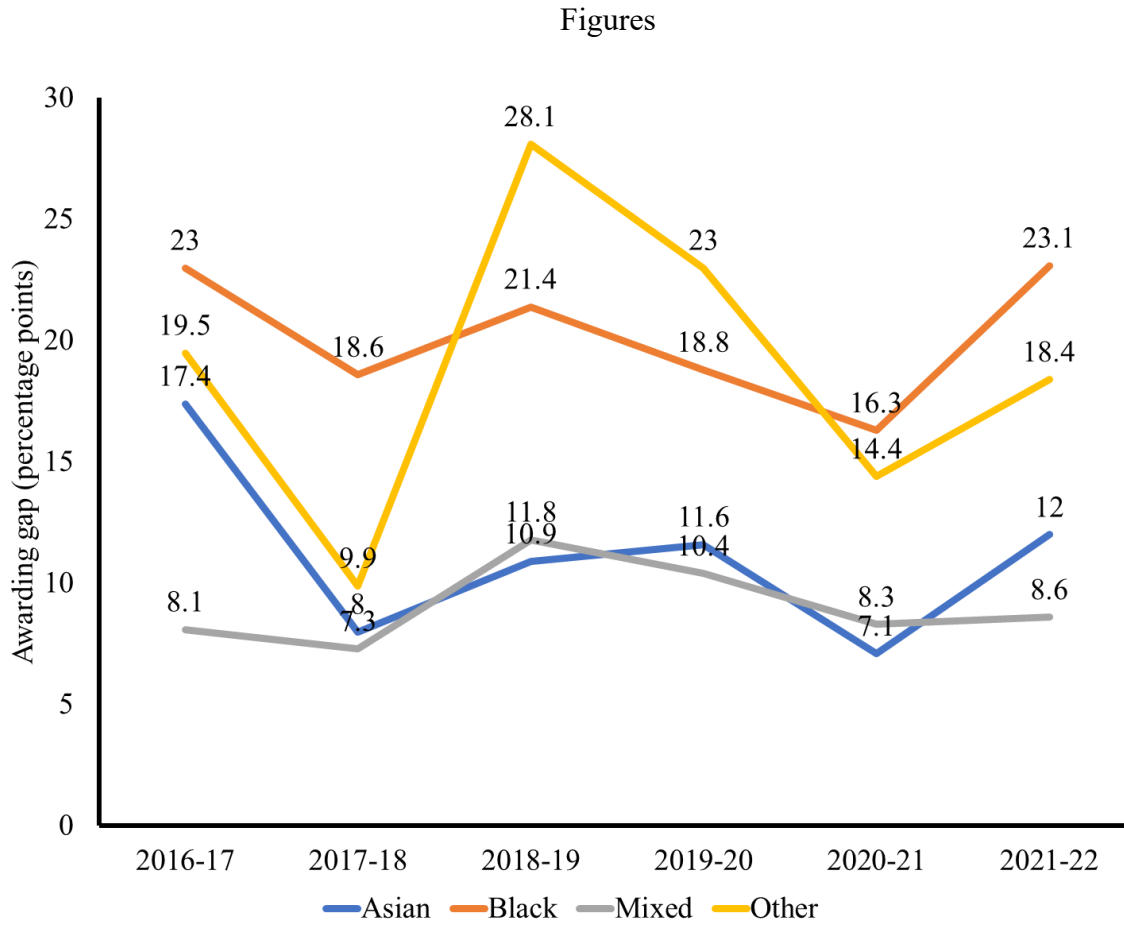


Figure 1. BAME awarding gap at LSBU over the last six years. Taken from Office for Students (2023)

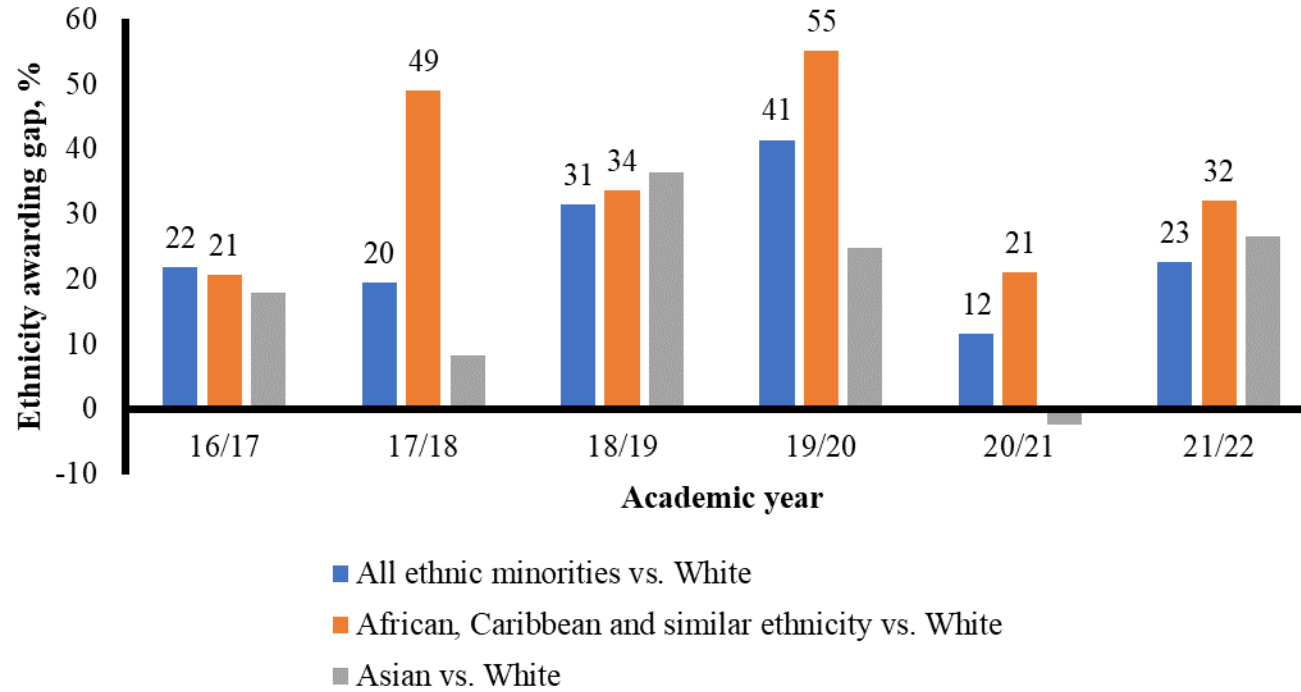


Figure 2. The trend for the awarding gap over the last six academic years in Psychology at London South Bank University.

Numbers above the bars are the awarding gaps (%) in each category.

NTU SCALE-UP

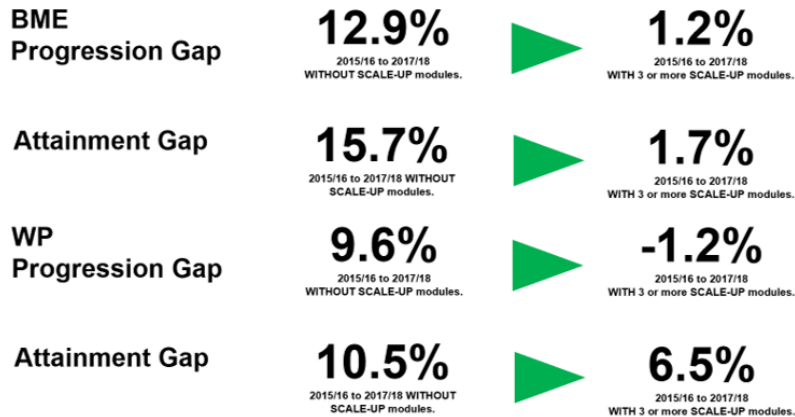


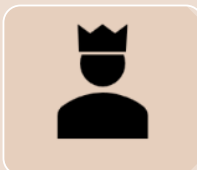
Figure 3. Progression and awarding gaps in BAME and Widening Participation (WP) groups between courses that do and do not adopt SCALE-UP at Nottingham Trent University

Group Activity

Scenario: A senior police officer is interested in the best method of interviewing, but the department doesn't have the resources to employ a psychologist. Instead, the police officer put together a team of trusted colleagues to consider these interviewing techniques and make a recommendation.

As a Team, critically consider these two techniques and report back.


- Discuss the pros and cons of each method of interviewing
- Agree on which method you think the police should use in real world investigations and explain why.
- Agree on how you will present your response (you can be creative!)
- Report back in 20 minutes
- Your report should be concise (<5 mins)



Manager

- Encourage everyone to contribute and reinforce good ideas (people management)
- Make sure your team completes the task in the allotted time (time management)
- Make sure the whole team is involved in the task and contributing to the discussion (leadership)


How should your group approach this task? Take the best advice from your Team.



Scribe

- Make a record of the group activity that your group can refer to later
- Check that everyone understands the key points that you are writing down
- Check that everyone agrees on the final points.
- Organise the record so it's communicated clearly

What is the best way to communicate the group recommendation? Spider diagram? Bullet points? pros and cons list? Could technology help?



Sceptic

- Make sure that the Team critically considers alternative ideas (critical thinking)
- Try to identify potential problems or issues that the Team has missed (analytical thinking).
- Make sure there is good reasoning and explanation for the Teams conclusions.

Make sure you have a well-reasoned argument for the recommendation.

Figure 4. Example of a group activity modified for SCALE-UP on investigative psychology

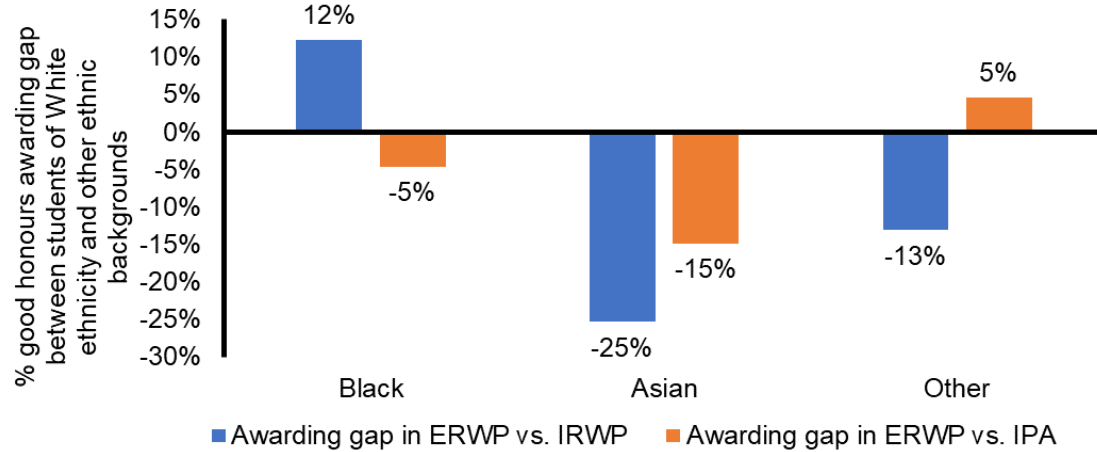


Figure 5. Percentage of students receiving a 2.1 or higher grade in each ethnic minority group compared to the White group. The blue bars compare Exploring Real World Psychology (ERWP), the module in which SCALE-UP was implemented, with Introducing Real World Psychology (IRWP) a comparator module in the previous semester. The orange bars compare ERWP with Introducing Psychological Approaches (IPA), another comparator module in the previous semester

Appendix 1. Example of a session plan for a seminar in ‘Exploring Real World Psychology’**Seminar 2: Investigative Interviewing****Purpose:**

- 1) To get students to experience interviewing witnesses using a memory enhancing interview protocol called the ‘Cognitive Interview’ and a control interview referred to as the structured interview.
- 2) Introduce the roles of Manager, Scribe and Sceptic in group work.

Group Activity 1: Investigative Interview

During the lecture students saw a video clip of a brawl in a pub.

- In groups of three they should interview each other about what they saw. One person should use the Cognitive Interview and the other person should use the Structured Interview the third person is the witness.
- Both Investigators should listen to the testimony under both procedures so they’re aware of the similarities and differences in the groups.
- The protocol and instructions for each interview are on the student handout.
- During the lecture they will have been introduced to the theory behind the Cognitive Interview and the memory enhancing components (report everything, context reinstatement, change perspective or reverse order).

Group Activity 2: Class Vote

- After they have experienced both interviewing techniques bring the class back together for a vote.
- We can use mentimeter/poll anywhere or do a simple show of hands.
- The key thing is that this is a **simple either/or decision** with no group discussion of the pros and cons of each method. The vote is intended to stimulate the conversations they’ll have in the next group activity. i.e. it’ll encourage them to think about which method is best overall.

Group Activity 3: Agree on the best reports

- Students are asked to use the role of manager, scribe and sceptic for this discussion and are asked to produce a “report” on their recommendation that could be understood by a senior police officer.
- This report can take any form – if students can use whatever technology is at their disposal. They could make a PowerPoint slide, draw on paper, use a padlet etc.
- The best reports will include research evidence from the lecture to support the arguments and be clearly communicated so a senior police officer could easily understand the issues with each report.
- All reports should include a critical discussion. Here are some issues students may consider...
 1. How long did the Cognitive Interview take compared to the Structured Interview?
 - Tutor notes: The CI should take much longer then the SI and this could be seen to be a disadvantage when police use it particularly for less serious crime.
 2. Which interview technique elicited the most amount of information?

Seminar 2: Investigative Interviewing

- Tutor notes: The CI should elicit much more information than the SI and they can discuss which of the cognitive components (report everything, context reinstatement, change perspective or reverse order) they think were most helpful.
3. Do you think there was a difference in the accuracy of the information recalled by interviewees between the two techniques?
 - Tutor notes: Difficult one to accurately answer but the literature suggests that the CI leads to an increased amount of information and also that the quality of the information is meant to be more accurate.
 4. Were there any parts of either interview that were difficult for the interviewer or interviewee?
 - Tutor notes: Change perspective and reverse order are both hard for the witness to do. So much so that it's not always appropriate to use these two components with vulnerable witnesses e.g. children and elderly. It is often difficult for the interviewer to avoid asking inappropriate questions i.e. leading questions which imply the answer in the question (were his trousers blue?). It is also difficult to listen to the witness and plan questions without interrupting the witness. Basically, good interviewing is a very difficult skill to master.
 5. How easy or difficult do you think police interviewers find it to use the Cognitive Interview?
 - Tutor notes: Police find it difficult to use the Cognitive Interview and sometimes don't use the components or don't use them properly, which can be detrimental to witness memory. Current research is looking at ways of revising the CI so it is still effective but simpler to use and less time consuming.

Group Activity 4: Class vote

After the students have presented their work, bring the class back together for a final vote, which method do students think is best. Do they all agree? Ask students if they'd like to share their report with the whole class or share some key reasons why they chose the method that they chose.

Group Activity 5: Reflection

Ask students to reflect on this group activity and consider the questions on the slides, but don't ask them to share their answers with the group.

You may point out to them that "Personal and Professional Development" is of of the assessment criteria for this module. Students are encouraged to reflect on their work and be proactive in managing their learning.

Finally, show students the slide about the group roles and are being used. This is another part of the reflection. You could ask them if they felt like they were developing their skills during the last task while they learned about investigative interviewing.

Appendix 2. Post-SCALE-UP surveys to students and staff about their experience of attending or delivering SCALE-UP-based seminars

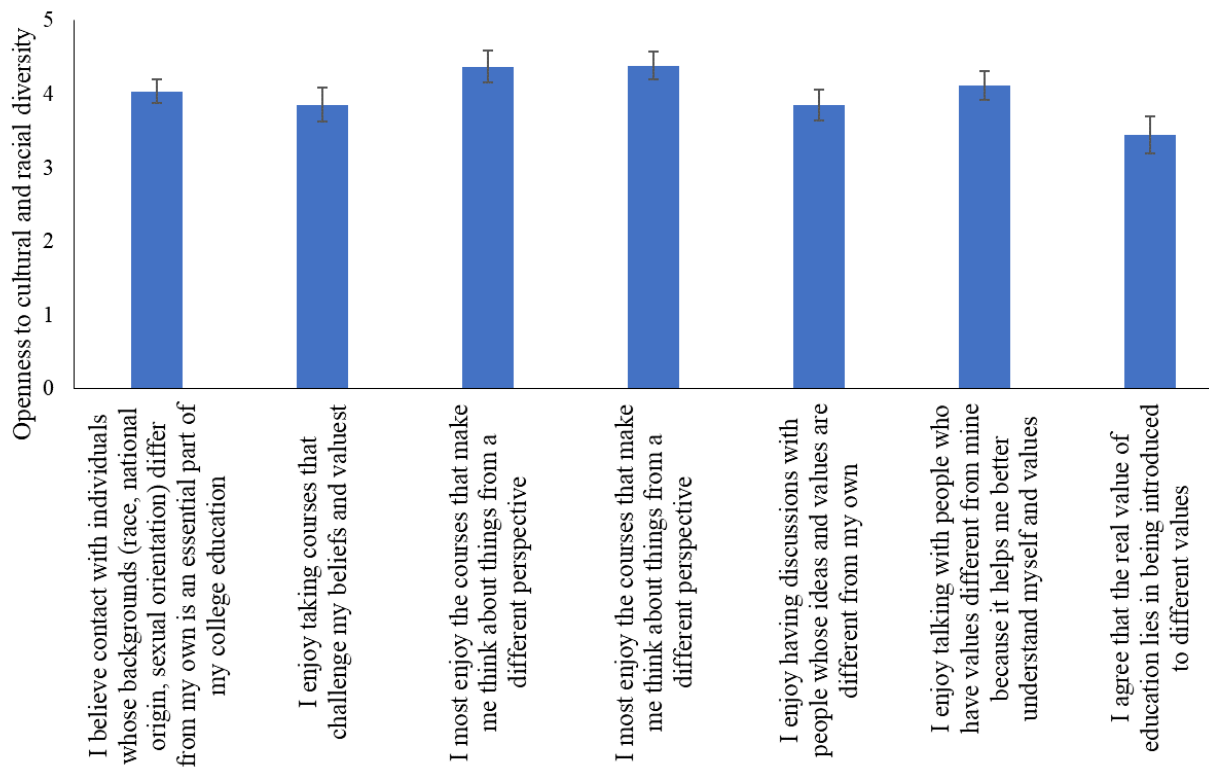
A. SCALE-UP training post-workshop survey with descriptive statistics of participant scores

| Item | N | Mean (S.D.) |
|--|----|-------------|
| 1. How much did you enjoy the workshop? Not at all (0) - A lot (100) | 10 | 63.7 (22.7) |
| 2. How likely are you to embed SCALE-UP in your teaching and learning? Unlikely (0) - Extremely likely (100) | 10 | 59.3 (30.7) |
| 3. What did you like about the workshop? (open-ended) | | |
| 4. How could we improve the workshop? (open-ended) | | |
| 5. How could we improve SCALE-UP to enhance your teaching practice? (open-ended) | | |
| 6. How likely are you to recommend the workshop to a colleague? Unlikely (0) - Very likely (100) | 10 | 58.8 (31.4) |

B. Student survey after the SCALE-UP module with descriptive statistics of participant scores

| Item | N | Mean (S.D.) |
|--|----|-------------|
| 1. Openness to Diversity and Challenge scale (Bowman, 2014; Pascarella et al., 1996) Instruction: <i>The following questions assess openness to cultural and racial diversity and the extent to which you enjoy being challenged by different perspectives, values, and ideas.</i> <i>Answer the following questions on a scale of from 1 = strongly disagree to 5 = strongly agree.</i> | | |
| a. I believe contact with individuals whose backgrounds (race, national origin, sexual orientation) differ from my own is an essential part of my college education | 27 | 4.04 (0.81) |
| b. I enjoy taking courses that challenge my beliefs and values | 27 | 3.85 (1.20) |

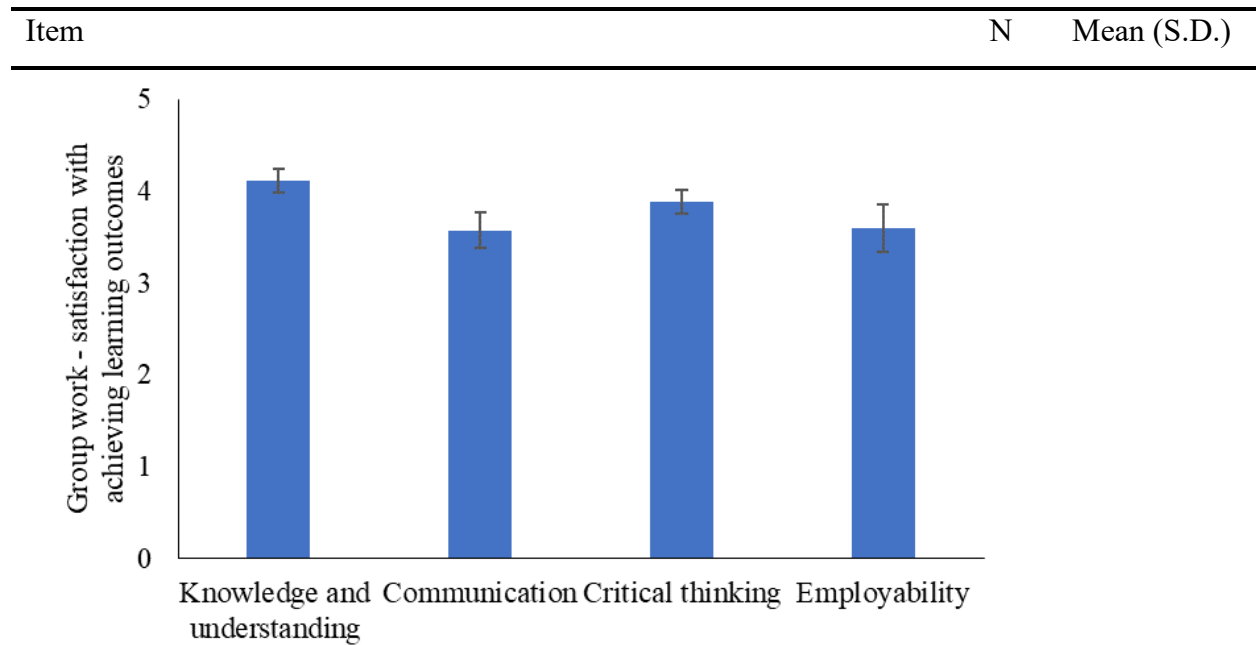
| Item | N | Mean (S.D.) |
|--|----|-------------|
| c. I most enjoy the courses that make me think about things from a different perspective; | 27 | 4.37 (1.11) |
| d. I enjoy having discussions with people whose ideas and values are different from my own; | 27 | 4.38 (1.10) |
| e. I enjoy talking with people who have values different from mine because it helps me better understand myself and values | 27 | 3.85 (1.01) |
| f. I agree that the real value of a college education lies in being introduced to different values. | 27 | 4.11 (1.31) |



Note: Error bars reflect standard error of mean

- How many seminars did you attend for Exploring Real World Psychology? 0-3; 4-6; 7-9; 10 or more 22 3.44 (0.95)
- The groupwork approach used was designed to help you address the learning outcomes of Exploring Real World Psychology. How well did the approach help you achieve each learning outcome. Please

| Item | N | Mean (S.D.) |
|---|----|-------------|
| <p>give a score of 1 to 5 for each where 1 is DID NOT HELP AT ALL, 3 is MADE NO DIFFERENCE COMPARED WITH OTHER MODULES and 5 is HELPED A GREAT DEAL:</p> | | |
| <p>a. <u>Knowledge and understanding</u>: Describe and evaluate the application of thinking, social and individual differences processes in explaining human experience and behaviour in the real world (all sessions).</p> | 26 | 4.12 (0.65) |
| <p>b. <u>Communication</u>: Develop effective written and spoken communication skills</p> | 26 | 3.38 (1.28) |
| <p>c. <u>Critical thinking</u>: (a) Have an awareness that the knowledge base used by practitioners is open to debate and change, and (b) Have an awareness of the link between psychological research and real world practice.</p> | 26 | 3.88 (0.65) |
| <p>d. <u>Employability</u>: Have an understanding and awareness of career pathways in psychology which will help you to develop and identify your own career aspirations.</p> | 25 | 3.60 (1.29) |
| <p>How did the seminars help you to achieve these learning outcomes? (open-ended)</p> | | |

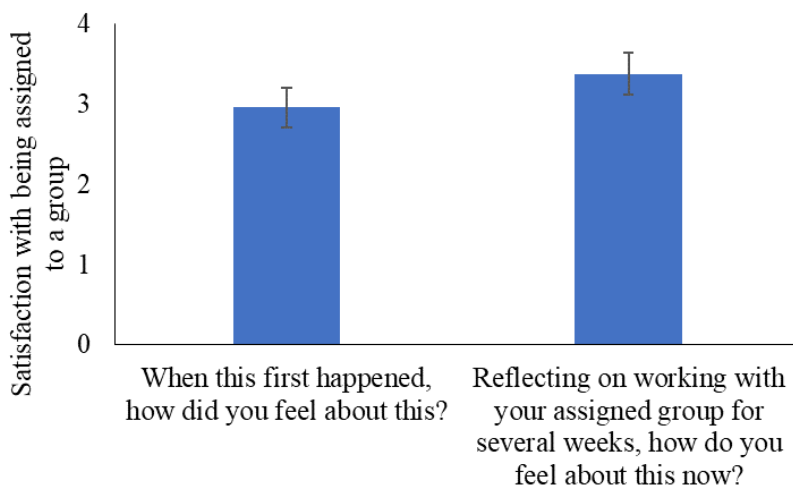


Note: Error bars reflect standard error of mean

4. At the start of the semester you were put into assigned groups with people that you might not already know. Using a scale of 1 to 5 where 1 is VERY DISATISFIED and 5 is VERY SATISFIED (5):-

- a. When this first happened, how did you feel about this? 24 2.96 (1.20)
- b. Reflecting on working with your assigned group for several weeks, how do you feel about this now? 24 3.38 (1.28)

Please explain the reasons for your rating. (open-ended)



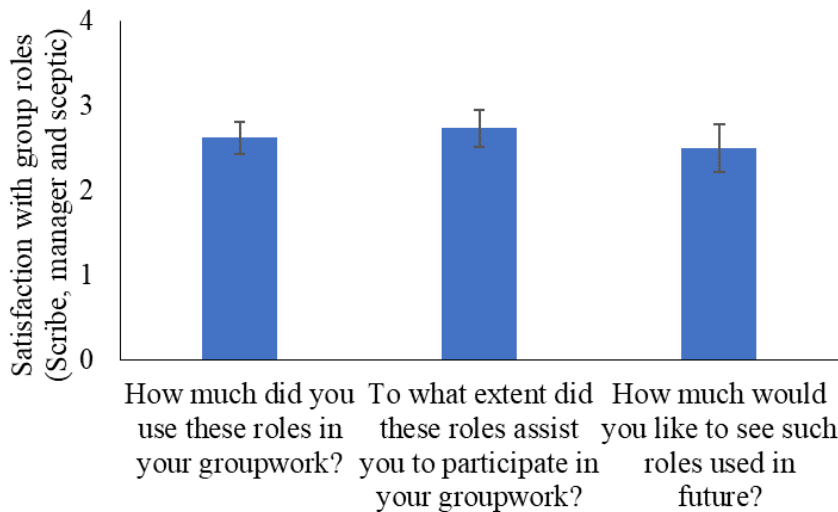
| Item | N | Mean (S.D.) |
|------|---|-------------|
|------|---|-------------|

Note: Error bars reflect standard error of mean

5. You were asked to adopt specific roles in groups, e.g., manager, scribe and sceptic. Please give a score of 1 to 5 for each where 1 is VERY LITTLE and 5 is A GREAT DEAL:

| | | |
|--|----|-------------|
| a. How much did you use these roles in your groupwork? | 24 | 2.63 (0.92) |
| b. To what extent did these roles assist you to participate in your groupwork? | 23 | 2.74 (1.05) |
| c. How much would you like to see such roles used in future? | 22 | 2.50 (1.34) |

Please share any thoughts on how you used these roles to work in groups (open-ended)



Note: Error bars reflect standard error of mean

6. What did you enjoy about the seminars that you attended for Exploring Real World Psychology? (open-ended)

7. How did these seminars differ to the ones that you attended last semester? (open-ended)

8. How did the structure of the seminars help you to understand and learn key concepts? (open-ended)

9. How could the seminars be improved? (open-ended)

| Item | N | Mean (S.D.) |
|--|---|-------------|
| 10. Please provide any other feedback on the seminars in this module. (open-ended question) | | |

C. Open-ended questions for feedback from Tutors

1. What did you enjoy about delivering the seminars for Exploring Real World Psychology?
2. How did your experience of delivering seminars for Exploring Real World Psychology differ from delivering seminars on other modules?
3. How did the students engage with the seminars?
4. How did students engage in group activities?
5. How did such group interactions on this module differ from the group interactions on other modules?
6. How did the structure of the seminars help students to understand and learn key concepts?
7. How did the structure of the seminars help you to deliver the seminar?
8. What did you find challenging about delivering the seminars on this module?
9. How could these seminars be improved?
10. Please provide any other feedback on the seminars in this module.