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The Agentic Belonging Workshop: A Quasi-Experimental Evaluation of a Social Belonging Intervention in two English Universities

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Abstract

Given its close links to student success, universities are heavily invested in how they can positively influence their students' sense of belonging. One approach to this is through social belonging interventions, where universities attempt to develop student agency. This study takes a quasi-experimental approach by evaluating the impact of a newly developed agentic belonging workshop at two English universities. One hundred and one first-year undergraduate students attended either this belonging workshop (36), a control study-skills workshop (27), or they attended neither workshop (38). Findings show that the agentic workshop led to significantly higher self-reported scores in understanding of belonging amongst attendees compared to non-attendees. Whilst changes in students' sense of belonging was not significantly different across workshop groups, belonging workshop attendees were significantly more likely to continue into the second year of study compared to both control groups. This study contributes promising findings for how social belonging interventions can be taken forward within the higher education context in the United Kingdom.

Keywords: Student belonging; student agency; agentic belonging; impact evaluation.

Introduction

The concept of student belonging as a potential means to enhance students' experiences and success has been increasingly accepted over the last few years, both within the United Kingdom and internationally (Allen et al., 2024; Gilani, 2023). Student belonging is conceptualised as the perception (Cook-Sather and Seay, 2021) of being part of a wider academic community (Peacock et al., 2020), and being able to be one's true, authentic self (Picton et al., 2017). The increased interest in student belonging is for good reason. Existing research has shown how student belonging has a significant connection to many aspects of student success; from improved academic performance (Veldman et al., 2023), engagement (Zumbrunn et al. 2014) and retention rates (Gopalan et al., 2022). In context, there is a growing interest in the potential of social belonging interventions where universities talk openly with students about the dynamic and personal nature of belonging (Chrobak, 2024; Murphy et al., 2020).

This study evaluates a newly developed social belonging intervention in two English universities. The workshop was delivered to 36 first-year undergraduate students, as part of a wider study of 101 students. A quasi-experimental approach was utilised to address the following research questions:

1. *To what extent can workshop interventions enhance first-year undergraduate students' understanding of belonging?*
2. *What effect does attendance of the agentic belonging workshop have on subsequent changes in levels of belonging?*
3. *To what extent is sense of belonging a predictor of student retention, measured by continuation of first-year undergraduate students into their second year of study?*

The analyses in this study use data visualisation and regression analyses show that the Belonging Group (attendees of the agentic belonging workshop) had significantly higher understanding of belonging against most questions asked, compared to the Non-Attendee Group (a control group that did not attend either workshop). Students' self-reported learning outcomes of the workshops were also similarly high compared to attendees of a well-established study skills workshop (Study Skills Group). Students in the Non-Attendee Group and Study Skills Group reported a decreasing sense of belonging across the academic year, while the Belonging Group's belonging scores were more stable. However, these differences were not statistically significant. Despite this, both control groups were significantly less likely to continue into the second year compared to the Belonging Group.

These findings suggest that social belonging interventions, which have primarily been examined in the United States to-date, also show promise for positively affecting student outcomes in the UK higher education context. The discussion focuses on how these results relate to existing research findings and how the agentic belonging workshop can be taken forward.

Literature Review

Understanding and Influencing Students' Sense of Belonging

For an individual to develop a sense of belonging – either at university or beyond – requires some level of capacity and energy for involvement, motivation and action to belong, shared or complementary characteristics, and welcoming conditions (Hagerty et al., 1992; Kuurne & Vieno, 2022; Yuval-Davis, 2006). In the context of higher education student belonging, the latter two prerequisites could be seen as the responsibility of universities; how institutions provide the right opportunities and culture. Whereas the first two prerequisites ask something of the individual student. Of course, there are many benefits when students do feel that sense of belonging, but initially students are being asked to trust that this investment will be worth it for them. To take a "leap of faith" (Ajjawi et al., 2023, p. 9). This suggests that a careful balance is needed between individual student and institutional responsibility for building belonging.

As more institutions seek to enhance students' sense of belonging, more studies are taking an action research approach (Levitt, 2019) exploring the effectiveness of interventions to enhance students' sense of belonging. So far, these studies usually address one of the following themes: 1) Implementing more interactive pedagogy (Stephens & Morse, 2022), 2) Growth mindset fostering and reflective activities, also known as "social belonging interventions" (Murphy et al., 2020), 3) Provision of broader support, activities or communications outside of the classroom (Lim et al., 2022), 4) diversity related interventions (Keating et al., 2020), and 5) summer school and pre-arrival activities (Parkes, 2014).

Some studies utilise qualitative measures to understand how their belonging interventions had been experienced by students (Masika & Jones, 2016), which are helpful for providing a richer understanding of how students perceive these interventions. Most studies utilise pre-and-post-test evaluation of students' belonging levels (Keating et al., 2020) to be able to understand whether belonging levels improved, with some using either a randomised-control trial (Murphy et al., 2020) or quasi-experimental approach that compared changes to some sort of non-participatory group (Caligiuri et al., 2020; Liu et al., 2022).

Social Belonging Interventions and the Balance of Student Agency

Whilst most efforts to address student belonging focus on institutional provision of opportunities, support and university culture, a growing body of research has explored attempts to talk directly with students about their sense of belonging. The notion that underlies these social belonging interventions is that by addressing how belonging changes over time and normalising the idea that students may face challenges and barriers to their belonging, participants will then be better prepared to face those challenges (Chadha et al., 2024; Chrobak, 2024; Murphy et al., 2020). Practically, these interventions often achieve this by using stories from students in subsequent years of study, discussing barriers that they faced and how they overcame them (Tontodonato & Pringle, 2024). Interventions specifically designed to address aspects of student belonging are still in their infancy, and primarily based in the U.S. higher education context, with few published studies exploring their

impact. One such study was a randomised-control trial approach by Murphy et al. (2020), which introduced a social-belonging intervention that led to participants reporting higher levels of belonging and continuation rates. Over recent years, numerous other experimental studies have reaffirmed the positive impact that these interventions can have on increasing belonging and academic outcomes (Chrobak, 2024).

Theoretically, these social belonging interventions link closely to the concept of student agency. Within the context of student engagement, Klemenčič (2023) suggests that agency encompasses agentic possibility (power) and agentic orientation (will). The former is intricately linked to notions of students' academic freedom (Macfarlane, 2012), whereas the latter is based on self-efficacy (Bandura, 2001) and self-regulation (Zimmerman, 2008).

Other research into student agency within the context of student engagement has explored the concept through the angle of whether students feel comfortable to act in authentic ways. If students are not able to find peers like themselves or a broader institutional culture that aligns with their identity, they then face a difficult choice between acting authentically or self-concealing to attempt to 'fit in' (Vaccaro & Newman, 2017; Veldman et al., 2023). This closely aligns with student belonging literature, which suggests how students from minoritised backgrounds may need to exert additional effort to find students like themselves, so that they are able to act authentically (Vaccaro & Newman, 2017). This recognises that acting authentically to build belonging may be easier for some students than others.

Methodology

Methodological Approach

Given the keen focus on being able to practically assess efforts to enhance students' sense of belonging, and ultimately retention, this project has been designed as an action research study (Levitt, 2019). To appropriately explore the newly-developed agentic belonging intervention and its connections to changes in student belonging and retention, this action research study has been designed as both quasi-experimental and longitudinal.

The quasi-experimental design of the project sees participants' outcomes from the belonging intervention (Belonging Group) compared with outcomes from two distinct types of control groups: a group of students who attend a workshop on study skills (Study Skills Group), and a group of students who signed up for either workshop but did not attend (Non-Attendees Group). Experimental methods, such as quasi-experimental designs, are better able to establish causal links through their ability to control extraneous variables (Spiegelhalter, 2019). Quasi-experimental methods are also often more suitable than randomised-control trial designs, which without any prior pilot study would have involved extensive expenditure of time and resources, with risk of little gain (TASO, 2020).

The longitudinal aspects of the design have been included in recognition of belonging being fluid and changing (Allen et al., 2024), as well as to address the gaps in current longitudinal research on student belonging.

Action Research

Building on previous social belonging interventions, discussed above, the intention of this action research project was to develop a workshop intervention that could develop students' agency in how they built belonging at university – agentic belonging. This centred on helping students to better understand their own belonging needs – their preferences, and how these would be different for each student – and awareness of opportunities to build belonging within the university context. The workshops were made up of a series of activities so that attendees would be more likely to find the sessions interactive, engaging, and thus more likely to have a lasting impact. For example, attendees reviewed stories from past students about their journeys to build belonging at university and then took part in group activities to identify aspects of those stories that attendees identified with (Tontodonato & Pringle, 2024). The agentic belonging workshop was piloted with a group of paid student ambassadors, prior to its usage in this research project, and changes were made based on students' feedback of their experience of the workshop.

The workshop was delivered to new, undergraduate students as part of broader welcome programmes at two English universities. One of the institutions is a widening participation university, which admits a large proportion of historically underrepresented students, whilst the other is a more selective-recruiting institution with more strict entry conditions. The two institutions were selected for their differences, thus hopefully increasing the external validity of the findings. However, analyses exploring differences between institutions is out of scope for this article. This project also emulates previous research that has utilised a study skills intervention to act as a 'control' workshop (Murphy et al., 2020). The content for the study skills workshop was taken from existing study skills support interventions, which are well-established within higher education

(Donoghue and Hattie, 2021; Murphy et al., 2020). A practitioner toolkit has also been developed to enable replication of the workshops in other contexts (Appendix 1 via figshare).

Participant Recruitment and Data Collection

Close collaboration with each institution's student engagement teams ensured that the timing and promotion of the workshops was appropriate for the respective contexts, so that numbers of participants could be maximised. Workshops were promoted to students as post-arrival welcome events, advertised to all new, undergraduate students. A variety of methods were used to promote the workshops to students, which included messages featured within electronic newsletters, promotions through student mobile applications, posts on social media and in-person promotion through student Welcome ambassadors. More details on participant numbers are presented in Table 1.

Students signed up to be part of the research project through an online Qualtrics form, which provided them with information about the overarching research project, and consent information and forms. Demographic details were collected, including first-generation status, age, gender, length of commute, fee status and whether they had prior private schooling. These demographic details are included within analyses as a route to establish whether differences between the intervention groups may be explained by demographic variables. This helps to mitigate the risk selection bias within the quasi-experimental nature of the study. The demographic categories above were selected due to their prominence in the literature as potential factors that affect students' ability to build belonging. Due to ensuring that ethical approval could be agreed for the study, no special category data (e.g., sexual orientation or ethnicity) was collected within this research project.

Students who did not attend their registered workshop were asked if they wished to continue in the research project. This provided an opportunity for a second comparative group who did not receive either workshop intervention to be included in subsequent analyses (Non-Attendee Group).

Table 1

Participant Registration, Attendance, and Attrition Numbers

Institution type	Widening participation institution	Selective-recruiting institution	Total
Total registrations	**224**	**66**	**290**
Belonging workshop registrations	103	13	116
Study skills registrations	121	34	155
Total attendances	**51**	**12**	**63**
Belonging Group	33	3	36
Study Skills Group	18	9	27
Non-Attendee Group	27	11	38
Total students in study	**78**	**23**	**101**

At the beginning of workshops, participants were asked to complete a six-question validated belonging scale developed by Yorke (2016). This scale was selected for several reasons. Firstly, unlike other belonging scales such as Goodenow (1993), it has been created specifically for and tested within the context of U.K. higher education. Secondly, the questions recognise the multi-dimensional nature of belonging, rather than just asking about social or academic belonging. Finally, recognising the conceptualisations of belonging as dynamic, it was important to be able to run this survey with participants multiple times. Towards this end, the scale needed to not be burdensome or lengthy, as this would have increased the attrition of participants. Students who did not attend their registered workshop, but wished to remain within the research study, completed the Yorke scale as part of an online Qualtrics form that was sent to them when they confirmed their desire to continue within the project.

At the end of each workshop, all participants were asked to complete a short questionnaire to see how well they received the workshops and whether the learning objectives of the sessions were met. Full details of the scales are presented within Figure 1. As these post-workshop questionnaires have been created specifically for this study, they have not been externally validated. This poses a risk, as there is an unproven assumption that they do actually measure successful completion of the learning outcomes. Whilst some research suggests that students' self-assessment of their learning in workshops can be reliable (D'Eon et al., 2008), this is often context dependent (Lam, 2009). Despite this, self-assessment may be the "only feasible method" for evaluating the success of short workshops (Lam, 2009, p. 103). Given the scope of this research project, even though such

scales have not been validated, the ability to check whether the agentic belonging intervention changed how students understand the concept of belonging is an important part of the study's Theory of Change.

As noted, in addition to asking participants to complete the belonging scale before their workshops, they were also then invited to complete the questionnaire at three additional points throughout the remainder of the academic year; in December, February and May. Continuation data – whether students were still enrolled at their institution in December of their second year – was collected for all students who took part in the study. A data sharing agreement was created between the University of York and the two participating institutions to ensure that this data was transferred in a secure manner.

Methods of Analysis

Preliminary analyses were carried out to assess the internal reliability of the scales used in this study and whether missing data correlates with outcome variables. Cronbach's alpha scores were 0.607 for the belonging workshop learning outcomes and 0.884 for the study workshop scale. Whilst levels of internal consistency as measured through Cronbach's alpha are somewhat arbitrary (Taber, 2018), scores below 0.6 are often considered poor. Cronbach's alpha for the Yorke scale across all completion points was 0.842 – suggesting a very strong level of internal consistency. Binary logistic regression analysis was also carried out to assess whether students' sense of belonging scores in surveys was a predictor of their likelihood of missing the next survey. These analyses found that all average marginal effect sizes for these regression models were very small (survey-to-survey: AME = -0.001, p = 0.604, n = 192). In essence, there was no significant relationship between students' sense of belonging and their likelihood of participating in – or missing – their next survey opportunity.

Across the three research questions for this study, a combination of data visualisations and regression analyses were utilised. In the case of evaluating the differences across intervention groups for workshop learning outcomes and changes in sense of belonging, linear regression analyses were employed. For evaluating differences in the binary variable of continuation data, binary logistic regression models were used, including the creation of average marginal effects to better present the differences across workshop groups. The extent to which workshop interventions influence students' understanding of belonging – was addressed through data visualisations depicting how learning outcomes scores of the Belonging Group compared to the Study Skills Group. Furthermore, Belonging Group learning outcome scores were compared to the Non-Attendee Group through linear regression models. Similarly, for the second research question – whether students' workshop status predicts their changes in sense of belonging – data visualisations and linear regression models were developed. To account for variations in students' baseline levels of belonging, a variable was created to denote changes in belonging; calculated from each of the follow-up belonging surveys, minus that student's baseline belonging. As these models involved multiple data points from the same students – to explore changes in belonging over time - clustered standard errors were calculated. Binary logistic regression models were also utilised to address the third research question by exploring the connections between students' intervention status – in essence, which workshop if any they attended – and continuation status.

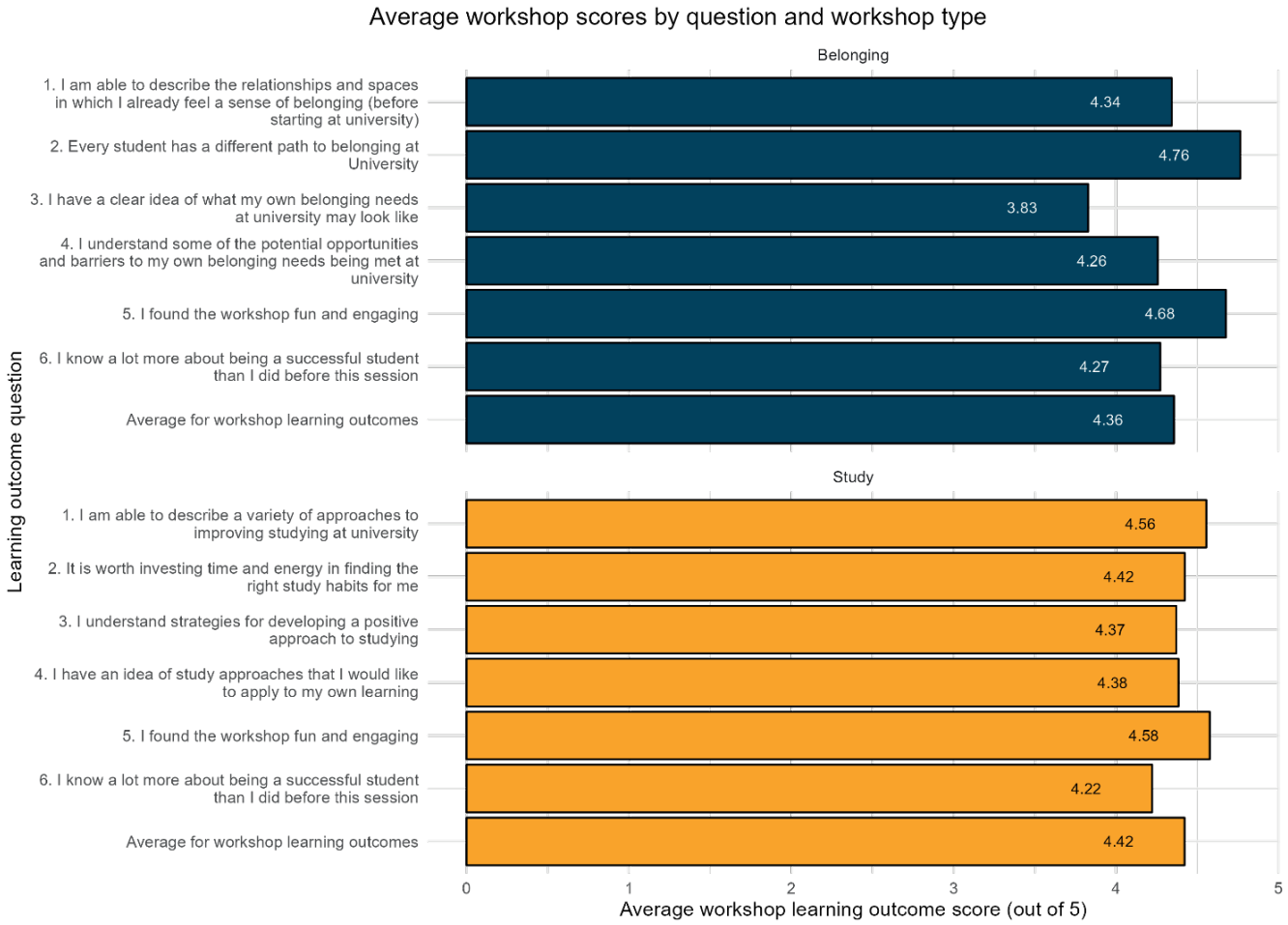
Results

Evaluating the Interventions – Learning Outcomes by Workshop Type

Average learning outcome scores for each workshop were very similar and high (Figure 1), which suggests that participants felt the content of the workshops was addressed equally as well in both cases. This assumes that both sets of questions have equivalent difficulty. Whilst the two question sets cannot be perfectly compared, the questions have been designed to be very similar to allow this comparison. Similar scores were seen for the questions around workshop experience 'I found the workshop fun and engaging' and utility 'I know a lot more about being a successful student than I did before this session'. Overall, this suggests that the principles and aims underlying the experimental belonging workshop were understood to a similar degree as those underlying the more established study skills topic. Given the already prevalent use of study skills workshops within universities to support students, this is a promising result to suggest that within self-reported post-workshop surveys, students can find belonging interventions similarly understandable, enjoyable and relevant to their success as students.

Figure 1

Average Workshop Learning Outcome Scores by Question from Both the Belonging Group – 'Belonging' – and Study Skills Group – 'Study'



The Non-Attendee Group also completed questions that mirrored those asked at the end of the workshops to evaluate whether learning outcomes had been met. The results from the Non-Attendee Group were compared to the Belonging Group (Figure 2). Linear regression analysis (Table 2) showed that learning outcomes 1, 2 and 4 were all significantly lower for the Non-Attendee Group with large effect sizes. The Non-Attendee Group had between 0.42 and 0.6 lower average scores against these learning outcome questions compared to the Belonging Group. However, learning outcome 3: "I have a clear idea of what my own belonging needs may look like", was not found to be significantly different between these two groups.

A caveat to this analysis is that those who registered, but did not attend the workshops, may have inherent differences that explain the variance in the learning outcome results. To try and account for some of these differences, the regression models within Table 2 also include all students' demographic details, meaning that the variance in estimates between the Belonging Group and Non-Attendee Group account for any demographic differences. Whilst this partially addresses differences between these two groups, as part of the quasi-experimental design of this study, it cannot fully account for all differences between the groups. This challenge is discussed further within the limitations section.

Figure 2

Average Workshop Learning Outcome Scores for Students in the Belonging Group and Non-Attendee Group

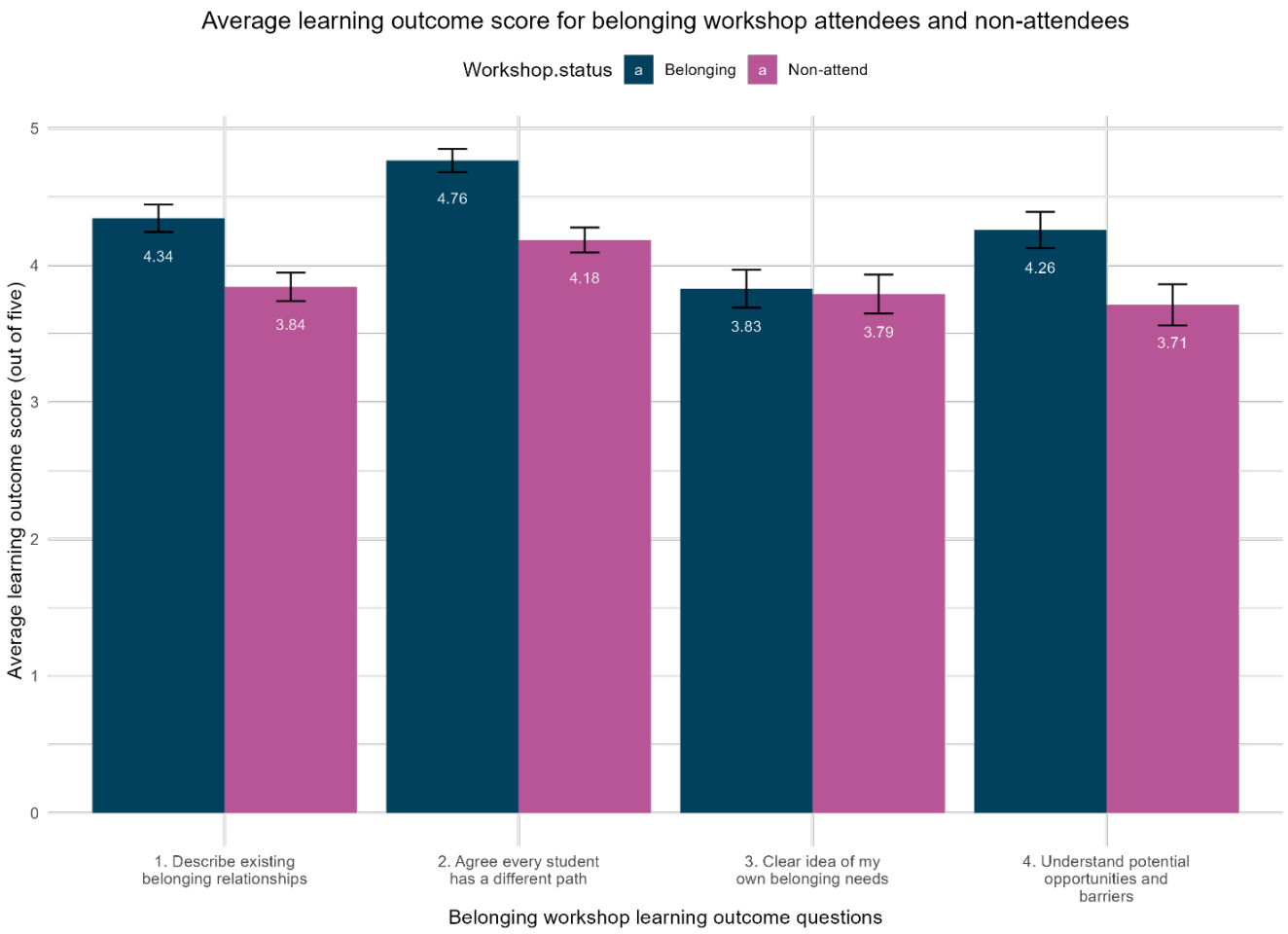


Table 2

Multiple Linear Regression Models Exploring Belonging Workshop Attendance as a Predictor of Learning Outcomes

Learning outcomes	term	Estimate	Std error	p-value
1) I am able to describe the relationships and spaces in which I already feel a sense of belonging (N = 73)	(Intercept)	4.276	0.283	0.000
	Non-attend	-0.421	0.176	0.020
2) Every student has a different path to belonging at university (N = 72)	(Intercept)	4.749	0.245	0.000
	Non-attend	-0.608	0.152	0.000
3) I have a clear idea of what my own belonging needs at university may look like (N = 73)	(Intercept)	3.201	0.355	0.000
	Non-attend	0.010	0.221	0.966
4) I understand some of the potential opportunities and barriers to my own belonging needs being met at university (N = 73)	(Intercept)	3.621	0.377	0.000
	Non-attend	-0.545	0.235	0.024

Notes: In these models, non-attend represents the learning outcome scores of the Non-Attendee Group compared to the Belonging Group as the reference group. Demographic variables were included within the regression but were not presented in these results for clarity of presentation.

How Belonging Changes Over Time

Means and standard deviations for each survey, including breakdowns by students' workshop status, are presented in Table 3 and visualised in Figure 3. These data show that students' sense of belonging decreases through the first year of study for these undergraduate participants. On average, students' sense of belonging decreased about two percent at each survey measurement point, resulting in an overall decrease in belonging from 78.1 to 72.9 – representing a five-point decrease. Whilst, on average, each workshop status group of participants saw their sense of belonging levels decrease through the year, students who took part in the agentic belonging intervention – the Belonging Group – saw the smallest decrease; less than one point.

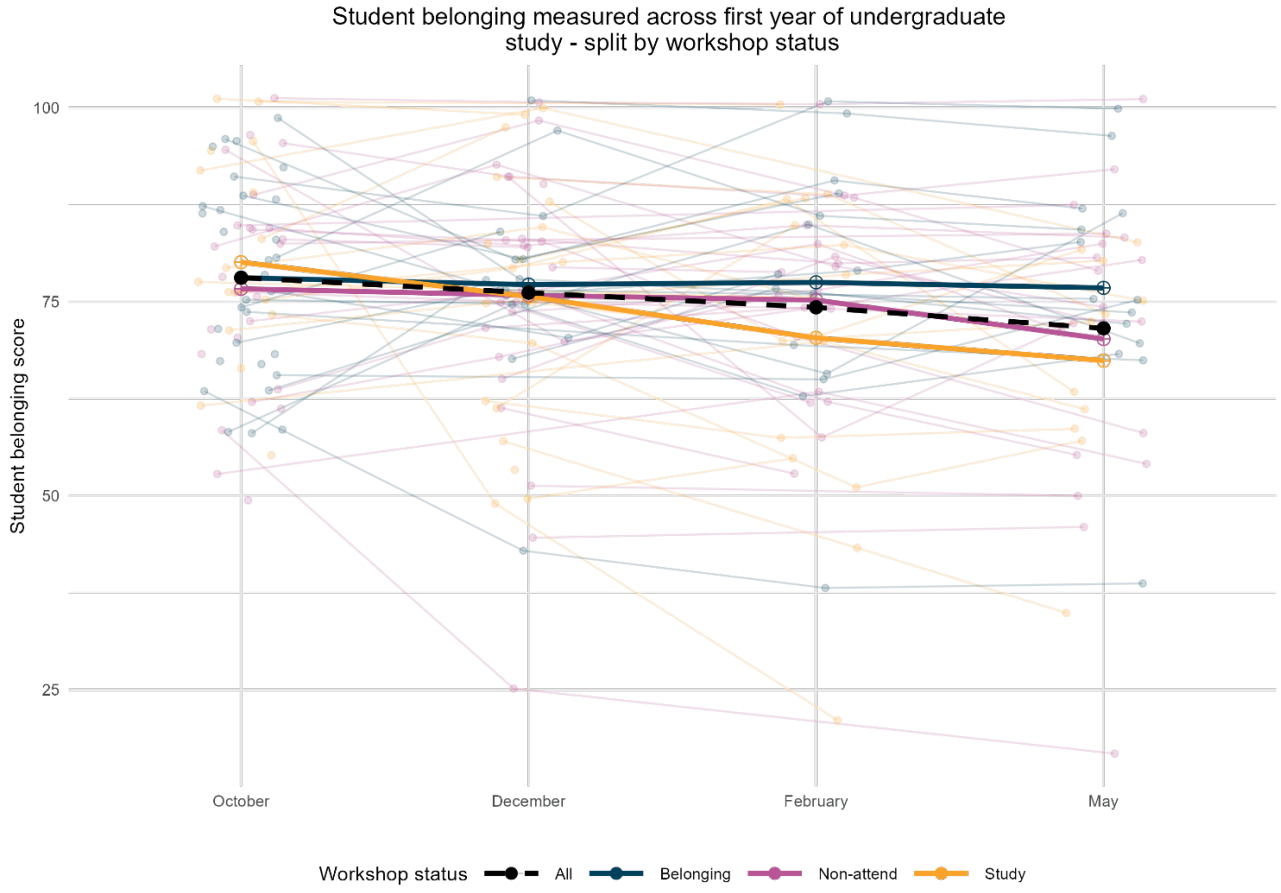
Table 3

Descriptive Statistics of Means and Standard Deviations (SD) From Each Survey Submission Point, Split by Intervention Status

Data point	Overall		Belonging Group		Study Skills Group		Non-Attendee Group	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Oct. survey	78.1	12.8	78.1	12.4	80.1	13.0	76.6	13.3
Dec. survey	76.2	15.3	77.2	12.4	75.7	16.0	75.8	17.1
Feb. survey	74.3	15.8	77.5	16.0	70.3	19.9	75.2	11.1
May survey	72.9	17.1	77.4	12.5	68.6	15.7	72.1	20.2

Figure 3

Student Belonging Measured Across First Year of Undergraduate Study from Survey Data – Split by Intervention Status



Linear regression modelling (Table 4) was used to explore whether survey timepoints and workshop status are predictors of changes in belonging. This is important to explore whether these changes in belonging are statistically significant – overall and by workshop status. Given that this analysis uses multiple data points from the same students, introducing the risk of multiple uses of correlated data, clustered standard errors were calculated to account for this. Overall, whilst the increasingly negative estimate values for the survey points reflect the decreasing levels of belonging, these are not significant. Similarly, whilst the Study Skills Group and Non-Attendee Group have lower estimates than the reference group of the belonging workshop attendees, these variances are not significant.

Table 4

Linear Regression Model Analysing the Extent to Which Workshop Status and Survey Timepoints are Predictors of Changes in Students' Sense of Belonging

Term	Estimate	Std error	p-value
(Intercept)	79.452	1.875	0.000
Survey point - December	-0.831	2.475	0.737
Survey point - February	-3.679	2.705	0.175
Survey point - May	-5.549	2.909	0.058
Workshop status – non-attend	-3.248	2.261	0.152
Workshop status – Study Skills	-3.623	2.504	0.149

Notes: Calculated using clustered standard errors to account for multiple data points from the same students being used within the model (n = 137).

Links Between Workshop Status and Continuation Rates

The differences in continuation rates across workshop groups was evaluated through binary logistic regression analysis (Table 5). The below regression analysis shows that both the Study Skill Group and Non-Attendee Group had negative continuation estimates compared to the reference group in the model – the Belonging Group. From examination of the average marginal effects, both the Study Skills Group and Non-Attendee Group were significantly less likely to continue. The Non-Attendee Group were 25% less likely to continue compared to the Belonging Group ($p = 0.002$), whilst the Study Skills Group were 16.5% less likely to continue ($p = 0.047$). This regression analysis was recoded to then establish whether there was a significant difference between the Study Skills Group and Non-Attendee Group. This model showed that whilst the Non-Attendee Group was associated with a lower continuation rate than the Study Skills Group – even once all demographic factors were accounted for – this was not a statistically significant difference (AME = -0.100, $\beta = 0.111$, $p = 0.368$, $n = 89$). The absolute values of continuation for each workgroup group are: Belonging Group = 94.1%, Study Skills Group = 82.1%, Non-Attendee Group = 74.4%

The Non-Attendee Group having the lowest continuation rate was expected, as these students may have had some early barriers in their studies that meant they were less likely to attend, as well as missing out on the hopeful benefits of attending either of the workshops. As discussed within the literature review section of this article, there is already a well-established body of evidence around the links between students' sense of belonging and continuation. Therefore, whilst it is not surprising that the Belonging Group had the highest continuation rates, it is somewhat surprising that this difference in continuation rates occurred even though this group did not report significantly higher levels of belonging.

Table 5

Binary Logistic Regression Analysis to Explore the Extent to Which Students' Workshop Status (Belonging Group, Study Skills Group Or Non-Attendee Group) is a Predictor of Continuation

Term	Estimate	Std error	p-value
(Intercept)	2.474	1.356	0.068
Workshop status – Non-attend	-2.804	1.167	0.016
Average marginal effects (Non-attend)	-0.252	0.083	0.002
Workshop status – Study	-2.193	1.203	0.068
Average marginal effects (Study)	-0.165	0.083	0.047

Notes: Students' demographic variables were also included within the regression model, but not reported above due to no significant relationships existing. Average marginal effects were calculated separately and added to the results for each workshop status as compared against the reference group of the belonging workshop (N = 89).

Discussion and Conclusions

Students who attended the agentic belonging workshop (Belonging Group) reported significantly higher learning outcome scores than the Non-Attendee Group for the majority of questions, even when controlling for demographic variables. Furthermore, the Belonging Group reported similarly high learning outcome scores as those attending the Study Skills Group, suggesting that the belonging workshop content was understood to a similar degree as this well-established form of higher education support intervention (Donoghue and Hattie, 2021; Murphy et al., 2020).

However, low Cronbach's alpha scores for the Belonging Group learning outcomes scale, combined with a lack of qualitative questions to attendees on their experience of the workshops, limit this study's ability to confidently assert what the workshop learning outcomes scale is actually measuring. Effectively measuring students' sense of belonging is well recognised as being challenging from a purely quantitative perspective, which is why supplementary qualitative approaches are often recommended to more effectively and inclusively measure this subjective construct (Lingat et al., 2022).

Findings showed that the Belonging Group had a less negative change in their sense of belonging compared to both the Study Skills Group and Non-Attendee Group. However, linear regression analysis showed that the differences between intervention groups was non-significant. The Belonging Group reported more stability in their sense of belonging scores across the first academic year, whilst the Study Skills Group and Non-Attendees Group had declines in their sense of belonging from first to last measurement. These results align with previous studies that have suggested that students tend to report a decline in their sense of belonging across the first year of study (Hausmann et al., 2007; O'Sullivan et al., 2019).

This study explored continuation rates by workshop status group, finding that there was a significant difference in the continuation rates of the Belonging Group and both other groups of students. This builds on previous research showing the effectiveness of belonging interventions to improve student retention rates (Chrobak, 2024; Murphy et al., 2020;). This significant difference in continuation rates persisted even when demographic variables amongst participants were accounted for within the logistic regression analyses.

Limitations of this Study

Given the quasi-experimental design of this study, students were choosing whether to take part in the research study, and whether they attended the belonging or study skills workshop, thereby introducing a risk of selection bias. Some elements of selection bias have been minimised through the collection and inclusion of students' demographic variables within regression analyses. However, only demographic variables captured have been able to be accounted for within these analyses.

Threats to construct validity exist in the use of an unvalidated scale to gather participants' self-reported assessment of meeting the workshops' learning outcomes. Whilst self-reported measurements may be the "only feasible method" for evaluating the success of short workshops (Lam, 2009, p. 103), it is still concerning that a low Cronbach's alpha score was found for the belonging workshop learning outcomes scale. This is further problematised by the lack of qualitative data from students on their reflections of the agentic belonging intervention and how they experienced the workshop. Future studies could include testing learning outcomes scales with participants and the inclusion of open-text questions to gather qualitative reflections from participants on their experiences of the workshop (Lingat et al., 2022).

Given the scope of this article, and participant numbers, analysis were not able to be included that compared analyses across the two institutions. This therefore limits the external validity of the results of this study, as it cannot be claimed that the agentic belonging workshop led to improved outcomes separately across both types of institution – widening participation and selective-recruiting.

Reflections and Next Steps for the Agentic Belonging Intervention

There is an accepted recognition of how belonging interventions can be helpful for students near the start of their time at university (Russell & Jarvis, 2019; UPP Foundation, 2024), and the findings of this study further support this idea. However, given that students reported an average decrease in their sense of belonging throughout the first academic year of study, which aligns with other longitudinal belonging research (Hausmann et al., 2007; O'Sullivan et al., 2019), consideration should be given to how such interventions could be adapted and delivered again at later points in students' journeys.

One intended outcome of the agentic belonging intervention was to normalise periods of non-belonging as something commonly experienced by students. This may have meant that the intervention increased students' resilience, which then contributed to their likelihood to continue in their studies. The workshop may not have given students the tools to overcome

all barriers to a positive sense of belonging, but did give them resilience to persist through these challenges. This could explain why belonging workshop students saw significantly higher rates of retention than the other workshop groups, even without having significantly higher sense of belonging levels. Further research could explore this by measuring students' resilience (Tudor & Spray, 2017), before and after delivery of the agentic belonging intervention.

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