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EDUCATIONAL PSYCHOLOGY & COUNSELLING | RESEARCH ARTICLE

Developing a logic model to support creative education and wellbeing in higher education

Dominik Havsteen-Franklin^{1,2*}, Jasmine Cooper³ and Shafeena Anas⁴

Abstract: University students are at higher risk than the general population of becoming mentally unwell. Dominant risk factors are to do with relationships, work load, the university environment and approaches to learning and teaching. Over recent decades higher education has been increasingly influenced by rules of commodification, however less commercially driven foci relating to wellbeing and mental health are increasingly being prioritised in higher education. This paper describes the development of a multifaceted logic model that can be adapted to university contexts to support wellbeing and creative approaches to learning. A socioecological approach refers to considering the group as a microsystem representative of larger systems and integrating emotionally focused and creative learning experiences that enhance subject relevant content. We implemented and evaluated a series of workshops to improve psychological safety and learning experience. We used a logic model design as an evaluation framework to map the inputs, activities, outputs, and outcomes. The pre and post outcome measure of psychological safety demonstrated significant change, where students could be more open and explorative in their learning experience. We also used a survey evaluation that demonstrated students found the project acceptable, delivered to a high standard, and that the content was relevant to their subject area. Given that the changing culture and ethos of a University can have a major influence on the wellbeing of the students, a flexible programme design as mapped through a logic model, provided us with a framework for introducing and evaluating a complex model for improving learning and wellbeing.

Subjects: Social Psychology; Work & Organizational Psychology; Mental Health; Business, Management and Accounting; Teachers & Teacher Education; Higher Education; Art & Visual Culture; Visual Arts; Allied Health

Keywords: Creative teaching; creative teaching; logic model; wellbeing; mental health; university students; curriculum development

1. Introduction

The wellbeing of students continues to be a major concern for universities in the UK. A study conducted by Ibrahim et al. (2013) suggested that approximately 30% of undergraduate students in a range of countries including the USA, Canada, Korea, Sweden and Turkey suffer from depression, which is significantly higher than in the general population. In their investigations, Bewick et al. (2010) also found evidence from a sample of 24,234 undergraduate students in the UK, that

their psychological wellbeing significantly decreases during their time in university. In their literature review, Mofatteh (2020) described the risk factors as being predominantly to do with the academic environment, the most cited being workload pressure and fear of low grades. Other factors included low self-esteem and confidence, underlying mental health conditions, personality type and loneliness, biological factors and lifestyle. Many of these factors have been further exacerbated by the COVID-19 pandemic (Bennett et al., 2022). However, overall, the academic environment was the most cited factor in determining the wellbeing of the student, which includes the pedagogic approach of the lecturer (Nielsen, 2010; Toomey, 2010). For example, Slavin et al. (2014) identified the need to address the root cause of stressors that lie within the curriculum design and delivery suggesting a curricular change to improve mental wellbeing. Significantly, the literature points to an issue of balancing approaches to

supporting student wellbeing with evaluating and promoting academic performance. For example, El Ansari and Stock (2010) describe a bidirectional relationship between achievement and wellbeing, suggesting that health impacts on performance and vice versa. Therefore, it is arguable that teaching requires enablement of wellbeing not only as an optional extracurricular activity, but to ensure that all students have an opportunity to consider personal and social wellbeing needs within their curriculum to support their academic achievements. Evidence suggests that effective teaching includes wellbeing elements that model compassionate (Gilbert, 2017), explorative approaches to learning (Beligatamulla et al., 2019) and cultivating wellbeing, resilience, identity and collaboration within student communities (Seligman & Csikszentmihalyi, 2000).

However, with pressurised academic demands on meeting competitive market expectations at the cost of constraining teaching practice, there becomes decreased scope for pedagogies that impact on student wellbeing and health to be introduced (Holmwood & Marcuello Servós, 2019). Competitive commodification resists the skills, attitudes, and behaviours needed to thrive both inside and outside the classroom as healthy social participants within a global ecology (Lomas et al., 2021). We argue that changes to attitudes and behaviours can be achieved through the integration of evidence informed interventions, for example, creative approaches to wellbeing such as mindfulness, reimagining socio-ecological resources, creatively engaging with learning strengths and selfcare (Bolier et al., 2013). By incorporating these principles into the educational process, students can develop a foundation for success and happiness in their learning experience (Wood et al., 2011). One key aspect of Positive Education is the development of emotional intelligence (EI) (Zhou et al., 2020). EI includes the ability to regulate one's own emotions, understand the emotions of others, and use emotions to navigate relationships effectively (Salovey & Mayer, 1990). Research has shown that students with higher EI tend to have better relationships, greater academic success, and improved mental health (Pekrun, 2011). Educators can help students develop their EI through creative exercises aiming to increase mindfulness, emotional regulation and collaboration (Goleman et al., 2002). Positive relationships with peers, mentors, and instructors can significantly enhance student wellbeing, academic performance, and overall success in higher education (Cohen & Wills, 1985). In addition to EI and positive relationships, interventions have focused on strengths and virtues (Höfer et al., 2020). Character strengths are inherent qualities, such as gratitude, integrity, and kindness, that can be cultivated and strengthened over time (Wood et al., 2011). By focusing on character strengths, students can develop a more positive outlook on life, respond better to challenges and setbacks, and be more resilient in the face of adversity (Hutchinson et al., 2011).

In many universities wellbeing has not been prioritised and we have continued to see increases in mental health issues for university students despite government mandates to provide stronger support for student wellbeing and substantial financial investment from most universities. Whilst the learning environment itself poses challenges, the conceptual apparatus and approaches to improving wellbeing in universities remains poorly researched (Upsher et al., 2022) and although a range of approaches have been tested (Noble et al., 2008), to our knowledge, no definitive

evidence on the effectiveness of interventions for supporting wellbeing learning integrated within the curriculum in higher education exists to date.

Part of the problem researchers face is finding clarity concerning the concept of wellbeing. Wellbeing is a widely used concept in education (El Ansari & Stock, 2010; Toomey, 2010) positioned on a spectrum from achieving hedonic life satisfaction to eudaemonic life fulfilment based on meeting psychological needs of autonomy, relatedness and competency (Lee et al., 2021). Eudaemonic wellbeing is a concept derived from positive psychology which focuses on positive emotion, relational engagement, meaning, purpose and accomplishment (Seligman, 2011). Essentially, together eudaemonic and hedonic constructs define wellbeing as a psychological aptitude towards achieving personal potential and evaluation of affective experience. In educational contexts, wellbeing is often described synonymously with mental health or as a correlate of mental health (Durand-Bush et al., 2015). However, wellbeing has been clearly contextualised in relation to mental health as a separate but related construct (Patalay & Fitzsimons, 2016). In a large cohort study Patalay and Fitzsimons (2016) investigated correlates of wellbeing and mental health with a child population. The person's total ecosystem was the subject of investigation following the World Health Organization (WHO), definition of health as "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity". WHO placed emphasis on the wellbeing of the individual as a correlate of health. However, Patalay and Fitzsimons (2016) findings suggest that predictors of poor wellbeing and mental health were markedly different. Shared correlates included security within the family and social communication, however the correlates for wellbeing broadly included social attunement, reciprocity, and responsive forms of communication with others.

To date there is little evidence to support any one approach to improving wellbeing for university students. Bewick et al. (2010) argue that this is to do with approaches centring on different constructs and lack of clarity about what intervention is hypothesised to produce what change. Given the importance of the student's social ecosystem, it is not surprising that many of the measures include the experience of relationships.

Recent studies suggest that the causes of increased mental illness and reduced wellbeing are intrinsic to the socioecological learning environment. For example, Scanlon et al. (2007) state that within universities key stressors impacting on wellbeing relate to the lack of support as students transition from one year to the next. This includes academic stressors impacting on identity, social networks and sense of belonging. As their academic journey progresses, the initial support usually reduces, and academic demands increase in line with expectations for greater independence. During the final stage of university, the student may face profound uncertainties about their future and again face a change of identity as they lose their "learner" role.

Our study was situated within a well-established campus-based university. The existing wellbeing response within the university aims to deliver learning models that prepare students for translating learning into employment contexts. The university services include online wellbeing and life skills campaigns, extracurricular learning, and an accessible counselling service (Brunel University, 2022). However, a recent ranking table designed by Humen for university student mental health (Advance, 2022) indicated that although this university was one of the highest ranking for investment in mental health and wellbeing service provision, the impact of the investment shows student satisfaction, awareness and support is ranked as "poor" illustrating a gap between provision and impact on the general student population.

Another priority for university education has been to develop global citizens, students who treat themselves and others with respect, humility and inclusion, moving towards human empowerment (Torres, 2015). However, the aim is complex to achieve and arguably begins with viewing the University itself as a socioecological system rather than as a set of individuals.

In order to respond to the complex and evolving conditions of the University environment and the wider socio-political context that the students are increasingly engaging with, we designed a creative intervention to respond to the gap between investment and student experience. The intervention was composed of four workshops carried out over one or two sessions within a modular business framework for undergraduate students. The aim of the study was to develop an intervention that formed part of the curriculum, integrating social experiences through centring on wellbeing as a social model. The study was designed to investigate whether the learning environment can be a precursor and microsystem to model social interactions that will be relevant to a wider social context. A key aim being to support the potentiality of student agency as integral to future social situations (Kendal et al., 2018).

Finding a way of conceptualising creative social learning that impacts on wellbeing across learning domains is defined by Edmondson (1999) as encouraging an open relationship to the organisation to generate new ideas, learning and to challenge norms or ideas that are counterproductive. This is summarised in her concept of psychological safety (see also Durand-Bush et al., 2015; Newman et al., 2017). Psychological safety is a concept salient to the university learning environment where students are encouraged to think critically, support one another, be able to make mistakes, learn from one another and be non-judgmental and compassionate in their collective growth. Whilst there are important competitive elements within learning environments, within the concept of psychological safety, safe competition is underpinned by caring and collective support.

In order to describe the elements of change as interactive and inter-related we developed a logic model as a flexible frame of reference that helps key stakeholders to map and evaluate the modular sessions. A logic map is a simple map of the elements of the intervention within the context, that includes inputs, activities, outputs and outcomes. As the main outcome, based on the intentions of the project, we measured psychological safety according to the social and work based factors underpinning models of wellbeing.

To summarise, understanding that the university is not only an extension of schooling but is also a transition into social and global employment contexts requires implementation of teaching strategies that begin to build models that are applicable to the employer environment and the learner environment. In this sense, bridging productivity with social motivational values is integral to the longer-term success for the student. If we look at industries where there is high productivity and ethical approaches to social awareness and emotional intelligence, we also find higher levels of psychological safety, because employees feel safe to make mistakes, innovate, learn from one another and speak up about misconduct (Baer & Frese, 2003). Psychological safety is developed through several mechanisms of change. Firstly, the sense of narrative, personal, social and organisational history supporting the formation of individual and group identity. Secondly, emotional intelligence, inclusive of empathic attunement and responsiveness. Thirdly, increasing bonding to the education organisation improves commitment to the tasks and holding peers in mind. Lastly, the collective awareness of requirements to meet the learning outcomes. These factors combined mean that students can live in a healthy learning environment that develops beyond their time at university and ultimately provides the foundations for developing wellbeing within their employment environment.

As Holmwood and Marcuello Servós (2019), powerfully articulate, positive social values, positive education, creative approaches to learning and resource led teaching are integral to a healthy university, where a sense of safety for the purposes of learning are prioritised above the marketisation of knowledge.

The rationale for this research study is that the development of a multifaceted logic model for creative teaching and wellbeing within a university context aimed at the promotion of university students' wellbeing could have an impact on students' educational experience which would help them to succeed in their learning.

2. Methods

We used a realist approach to evaluation which allows for adaptation of the model to subject areas, universities and student populations (e.g. undergraduate or postgraduate) so that we could determine the impact of the intervention. Realist approaches are particularly useful when there are complex systems and mixed outcomes (Westhorp, 2013). Within a complex socioecological organisation such as a campus-based university, capturing the impact and involvement of different stakeholders as well as the desired outputs and outcomes is critical to the success of a project. Therefore, models of evaluation that were less sensitive to the socioecological environment were rejected. In this model we hypothesised positive change to individual wellbeing and social systems based on a socioecological model (Schoon & Lyons-Amos, 2017). The evaluation and development of the programme was overseen by the Arts and Health research lead within the university in collaboration with an NHS partner organisation. The questions guiding the evaluation were:

- (1) Were there measurable changes to psychological safety following creative teaching/well-being intervention for students?
- (2) the programme content relate to supporting their required learning in the subject area?
- (3) Did the programme improve relationships and student community development?
- (4) Was the delivery of the programme and the materials of an appropriate standard?
- (5) What are the prospects for scalability of the model within university environments?

The evaluation was conducted in the business studies subject area with undergraduate students during September 2022. Business studies was chosen as a subject area due to having a strong international focus and previous low attendance to wellbeing initiatives and high levels of student support required. Within the study 25% of participants identified as having White or White European ethnicity compared with 27% from Asian backgrounds and the remaining 48% were from the rest of the world (see Table 1). Ethical approval was obtained from Brunel University ethics committee.

2.1. Logic models

Logic models of a programmatic type are widely used to illustrate change processes and how outcomes relate to inputs, resources, activities and outputs (Savaya & Waysman, 2005). Due to the wide range of contexts and programmes, the design and complexity of logic models varies greatly, however, most logic models use a flowchart type linear model describing the effect of inputs on outputs and outcomes (Savaya & Waysman, 2005). The logic model includes a theoretical basis of change and the result of logic model development provides the basis for evaluating key elements of a programme based on the hypothesised outputs and outcomes. As the context within which a programme logic model is designed is often changing, for example in terms of demographics, systems, processes, resources and the nature of the problem itself, logic models are designed so that each element can be considered, evaluated, reviewed, and altered according to those changes, rather than assuming a static description of a process. From the outset, logic models define how the problem is addressed, including the required resources and key stakeholders. Therefore, to determine the model of evaluation and change hypothesis requires stakeholder's involvement as outlined in the logic model itself.

2.2. Developing the art of wellbeing in education logic model

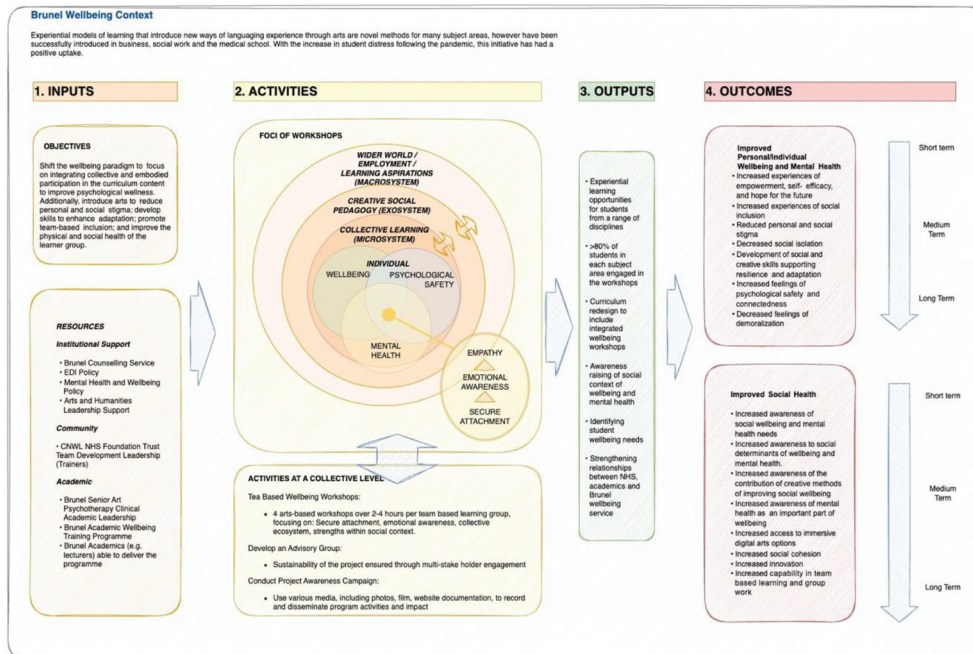
The Brunel University model of integrated wellbeing was delivered to a range of subject areas, including social work, business studies and the medical school during July to December 2022. The model runs alongside other activities such as counselling, wellbeing seminars and access to NHS services. A socioecological model was used to integrate clinical theory, organisational systems theory and arts based dialogic interventions. The integration of several theoretical domains required systematic sequential description using a total systems framework, whereby individual, microsystem, mesosystem and macrosystems contextualised the interrelated, intrapersonal, interpersonal, organisational and public policy constructs. The interconnected nature of these

Figure 1. Logic model for the art of wellbeing in education.

Brunel Wellbeing Initiative: Logic Model

Problem Statement

Brunel wellbeing services are characterized by discrete interventions and social platforms that are generally not embedded within the curriculum. This has led to problems with engagement for those in need, as well as gaps in participatory collective and cultural change for Brunel communities and teams, ultimately impacting on student health and wellbeing. Further to this, Brunel is an internationally focused organisation with many interacting cultures, where communication, stigma and taboo may prevent effective participation in wellbeing programmes.



perspectives provided the logic model framework (Kilanowski, 2017). The programme logic model (Figure 1) is a mapping of the *Art of Wellbeing in Education* initiative, comprising activities, resources, outputs and outcomes.

The initiative was designed to influence a cultural change at both student and staff level, introducing creative embodied and collective approaches to participation, facilitating improvements to student wellbeing. The required resources included the institutional input, with robust policies and leadership support. The relationship to the university policies was facilitated through the wellbeing and counselling service. An NHS partnership organisation enabled programmatic quality assurance, through employing wellbeing trainers that specialised in creative group development work. Lastly, the programme required academics trained in delivering the appropriate workshops and arts psychotherapies academics available to support the research and development of the programme. Purpose designed activities included a range of arts therapies and team-based learning creative exercises (Table 1.)

2.3. Logic model components

2.3.1. Inputs

The inputs into the programme were orientated around the objective of supporting students to engage in features of the programme through team-based social learning workshops that promoted inclusion, wellbeing, adaptation and awareness of the physical and mental health of the students. Resources were required from three aspects of the University. Firstly, institutional support from Brunel Mental Wellbeing Service as well as at a local policy level and with the support of the arts and health subject area leads. This was part of a strategic development within the University and was initially partly funded through investment in wellbeing, especially during times of student transition following COVID-19, where research had demonstrated high levels of risk to student wellbeing. Brunel has always been a community focused University with recent

Table 1. Outline of student wellbeing workshops

TIME	Wellbeing Workshops	Change/Aims
(30 minutes)	Workshop 1. Projective exercise – using string between people or a building exercise to begin an explorative approach to team based learning and social connectedness.	<ul style="list-style-type: none"> • Develop emotional insight • Develop interoceptive awareness • Develop awareness of their relationship to team based learning
(30 minutes)	Workshop 2. Visualisation - uses a visualisation of a garden experience to develop the class imagined as a garden metaphor. The class shares visual images and receives a visual interpretation of the team experience made by one of the facilitators.	<ul style="list-style-type: none"> • Develop class identification • Develop shared representational mental models of the learning ecosystem • Develop class cohesion
(30 minutes)	Workshop 3. Image making - uses the garden metaphor to discover the positioning and roles of the class members as elements of an interactive ecosystem.	<ul style="list-style-type: none"> • Clarify perceived strengths • Develop shared representational models of the learning ecosystem • Develop class cohesion
(30 minutes)	Workshop 4. Aggregation – aggregates findings from the previous workshops	<ul style="list-style-type: none"> • Wellbeing resource prioritisation • Embedding core values • Identify social learning priorities

developments of including an Arts and Health subject area and a Medical School. These were developed in the context of strong physiotherapy, occupational therapy and nursing departments. The health and wellbeing focus was supported through a partnership established with CNWL NHS Foundation Trust Arts Psychotherapies Service and the development of a joint clinical academic post working across both organisations. Finally, integral to the success of the programme was the required investment from academics to support the development and scalability of the interventions. This included leadership and training support from the Arts and Health subject area as well as academics willing to be trained to deliver the programme.

2.3.2. Activities

The activities themselves were grounded in a psychological and sociological theoretical model and structured according to an existing team development approach employed in the NHS for teams that are under high pressure and low control. In terms of the activities employed, the intervention is narrative based and uses a socioecological approach to building a safe environment and thereby secure attachment, developing emotional and social awareness. These capabilities are structured within the context of wellbeing and mental health, considering the strengths and resources of the group as well as the total ecosystem. The model is underpinned by an ethos of psychological safety. Facilitating the group in this way enables a safe and open exploration of a field of inquiry into relationships and collective learning and how this is embedded within a social learning strategy. Lastly, students are encouraged to engage with learning as a social environment theorised to model a healthy microsystem relating to potential social and organisational contexts (ecosystems) within which students may continue their learning or employment. Practically, this means offering four workshops structured around these themes and using creative multi-sensorial approaches to developing personal and social awareness. Workshop one uses materials to

Table 2. Demographics

		N
age	17–20	53
	20–32	4
	Prefer not to say	3
Gender	Female	40
	Male	20
Religion	Atheist	8
	Buddhist	2
	Christian	20
	Hindu	8
	Islamic	8
	Muslim	4
	Sikh	4
	Other	6
Ethnicity	African	4
	Bangladeshi	2
	Caribbean	3
	Chinese	2
	Indian	15
	Latino	1
	Pakistani	4
	White and Asian	1
	White British	4
	White European	11
	Any other mixed background	4
	Any other Asian background	7
Any other ethnic group	2	

represent the bond to the learning environment, workshop two uses visualisation of entering a garden ecosystem and image making to produce a shared representation of the learning environment. Workshop three focuses on the strengths that the students perceive about one another and the last workshop orientates the students towards resources required for further development of their experiential socioecological system.

2.3.3. *Outputs*

A key output is the development of a multi-disciplinary approach to teaching and learning that bridges psychological and sociological branches of learning theory. This means that students have a common language to understand their shared models of learning supporting an openness to engagement with different perspectives and interprofessional dialogues. Further to this, unless the student opts out for personal reasons, there is an expectation that the whole class attends, meaning that a record of increased attendance is in itself a highly significant output. For example, within the business school the attendance to opt in to wellbeing support was less than 5% of the students, compared to 80% when students were required to attend the sessions (or opt out of) the Art of Wellbeing in Education. The rationale for opting out rather than in, was made on the basis of linkage of the workshops to curriculum material in the domains of interpersonal communication, placements, organisational development and team-based learning. In most cases this does not mean a modification to the programme itself, but changes to the delivery methods of specific areas of curricular content, for example using less didactic taught content, and using more team-

based learning approaches coupled with a social/critical pedagogic and a creative socioecological frame of reference. Another output was about increased levels of awareness of the importance of mental health and wellbeing for students and staff. Therefore, the importance of engagement was highlighted as a core output. The awareness of requirements for extra student support was also generated during the workshops where students were encouraged to talk more openly about their relationship to the programme and experience of team-based learning, thereby enabling the academic to provide sign posting or tutorial or mental health support as required. A final output was evidence of a stronger relationship between the counselling service, NHS mental health and team development expertise, the arts and health subject area and the academics within a range of subject areas. Improved relationships were represented by increased dialogues, opportunities for raising awareness, including staff training sessions and new collaborations beyond the project to enhance wellbeing and health in new interdisciplinary programmes of study.

2.3.4. Outcomes

Outcomes of the project are focused on student experience. Our aim being to develop not only individualised change, but also social change within the learning ecosystem. We focused on several domains of change: social, wellbeing and mental health. Within this we anticipated observable changes to self-esteem and confidence, based on feeling that they were developing a stronger relationship to realising their futures. Because of the emphasis on the social ecosystem, we anticipated a stronger sense of inclusion through the development of shared themes. Shared themes also lend themselves to destigmatising some of the concerns and anxieties that people may have about their own mental health and wellbeing, such as feeling lonely, sad or disconnected. Raising awareness and sharing was facilitated through creative exercises, many of which could be easily conducted outside of the sessions by the students, such as developing emotional and bodily awareness through mindfulness exercises, engaging in more open dialogic approaches to supporting one another and not being afraid to speak up about mistreatment or bullying. Whilst at this stage there has not been a longitudinal study, we would anticipate that these factors could in the long-term impact on the student's capacity to adapt to new environments more generally, thereby impacting on resilience, demoralization and psychological safety through an ability to influence social cohesion in environments beyond their university programme.

2.4. Evaluation methods

As previously stated, the programme logic model describes interactive elements that together form the basis of change processes within a given programme design. We focused on four areas of impact for students; changes to psychological safety, educational viability, delivery of the programme and acceptability of the programme. The evaluation used a mixed methods design. The survey was developed by a small research team based at the University. The survey and outcome measures were administered to 64 participants at the beginning and end of sessions. The response rate was 84.5% of participants. As the project was designed to pilot a model of wellbeing development, we focused on immediate impact to support consideration of future evaluations. We used a standardised outcome measurement of psychological safety, widely used in business and healthcare to evaluate a relationship to a real-world social environment to test our hypothesis that a social microsystem can be generated within a classroom context. An online survey was used to collect data about acceptability, delivery, and educational viability. To effectively evaluate the change mechanism described in the form of the logic model, data is required that will offer evidence of each stage of the change mechanism. The model was developed based on evidence from team development, healthcare organisational development, systemic and socioecological theory and therefore offered a novel approach for integrating wellbeing within a learning environment. Given the novelty of the approach, further studies collecting longitudinal data will be invaluable in helping to refine the logic model as the project progresses. As we anticipate that the elements employed in the workshops will impact on health and wellbeing and we theorised change mechanisms to produce these changes, measures will require alignment with impact on health and wellbeing to provide evidence of effectiveness and scalability.

2.5. Sample selection

The sample was defined by the first-year cohort for the subject area of business studies in Brunel University. Before receiving the workshops, all students provided their consent for being involved in the study through completion of an electronic consent form. Eleven students opted out or did not complete the full dataset, which was 15.5% of eligible participants.

2.6. Measure

We used the Psychological Safety Scale (PSS) as devised by Edmondson (1999), which is a validated instrument used to assess the inclusion of team members and their freedom to voice ideas, opinions and concerns. We used the short version and adjusted language to suit an educational environment substituting “department” for “peers”, for example “Help is available from my peers when I have a problem.” The PSS uses seven items, and a five-point Likert scale (1, strongly disagree, to 5, strongly agree). Where values were missing, given the low number the student’s data was omitted from the study.

3. Results

3.1. Descriptive statistics

The business students attending the programme were made up of 88% 17–20 year-olds with only 12% preferring not to say or being over twenty years old. Two thirds of the cohort were female and the group represented over seven religions and thirteen ethnicities (Table 2).

3.2. Outcomes

The data comprised of 60 students with an age range of 17 to 32 and a mean age of 18.8 years (see Table 3.). A paired-samples t-test was conducted to examine the measurable impact of the workshops on psychological safety, administered pre and post intervention using online survey software. The t-test analysis showed that there was statistically significant change to psychological safety following implementation of the programme. The Psychological Safety Scale (PSS) showed a significant difference (See Figure 2) with a medium effect size (Calin-Jageman & Cumming, 2019).

3.3. Programme acceptability

We administered a survey to 60 students to determine whether the programme was good value for money, of educational benefit and whether the students would recommend the intervention to their peers. This was to ascertain the value of the workshops in context and whether the workshops were considered as being acceptable within the educational environment.

The results (Figure 3) demonstrated a high level of acceptability in all three domains. 83% of participants felt that they would recommend the workshops to other students, suggesting that there is perceived benefit to the wider student group. 70% stated that the workshops had educational benefit and 69% stated that the workshops were good value for money.

Table 3. Statistical calculations for T-Test and effect size

Descriptive	N	Mean	Median	SD	SE		
PSS_Pre_Scale	60	3.483	3.364	0.598	0.077		
PSS_Post	60	3.679	3.727	0.572	0.074		
	Statistic	df	P	Mean Diff.	SE Diff.	Effect Size	
PSS Scale	-3.182	59	0.002	-0.195	0.061	Cohen's d	-0.411

Figure 2. Pre and post data for 60 students attending the workshops.

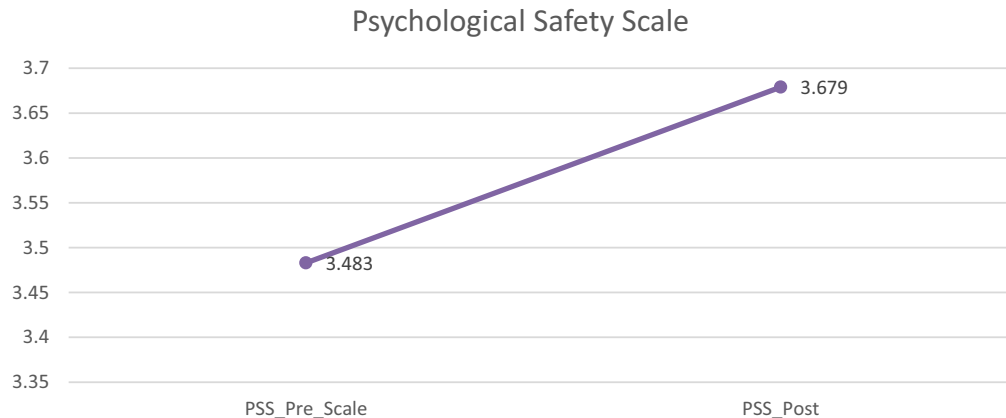
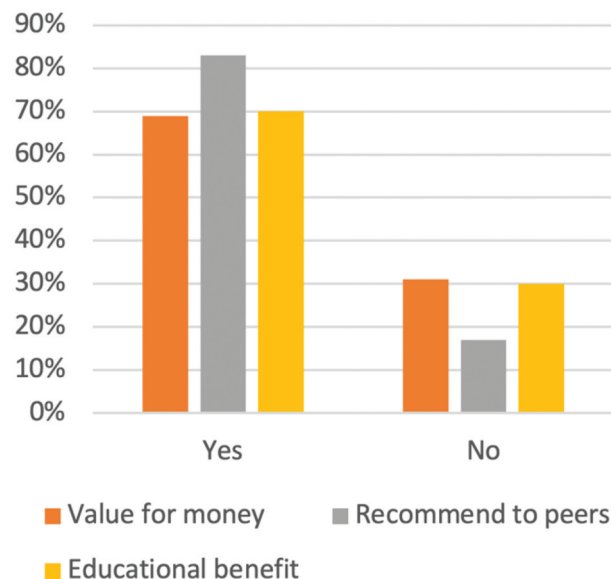


Figure 3. Programme acceptability. Counts based on responses from 60 students to the questions: “Do you believe that this is good value for money?”; “Would you recommend this to other students?”; “Do you feel that your education would benefit from routine inclusion of these exercises?”



3.4. Programme delivery

To assess the quality of programme delivery we asked about the standard of course materials and programme delivery. 100% stated that the course materials were ranging from good to excellent with 27% stating that they were of an excellent standard. 100% also rated the delivery of the programme as being good, very good or excellent. These results (Figure 4) indicate that the quality of the delivery was perceived as being of an acceptable standard for all students.

3.5. Educational value

One of our main objectives was to ensure that the materials were relevant to the student’s curriculum and learning outcomes. Part of student learning on the programme was about social and organisational systems and culture. The majority of students (79%) stated that the workshops improved their understanding of social systems and 87% stated that the workshops will help them to develop a stronger sense of a community (Figure 5).

4. Discussion

Promoting psychological safety within the business subject area in university environments has been demonstrated to build transferrable skills, including improving employability and work ethics, for example, developing inclusive leader leadership skills (Zhang et al., 2020) and team-based

Figure 4. Delivery of the programme. Counts based on responses from 60 students to the questions: ‘How would you rate the trainer’s ability to facilitate clearly and meaningfully?’; ‘How would you rate the course materials?’

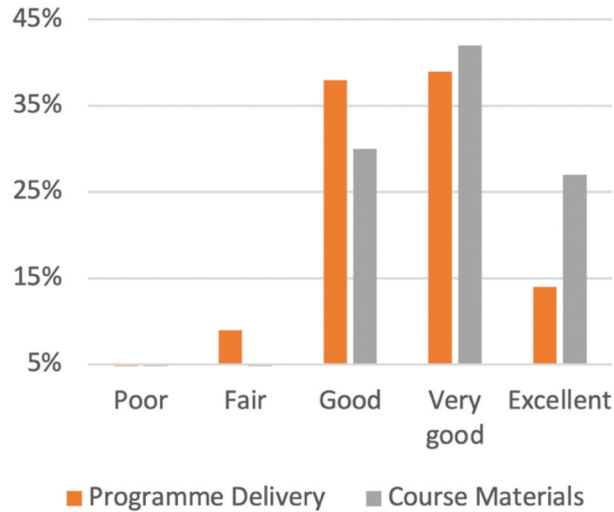
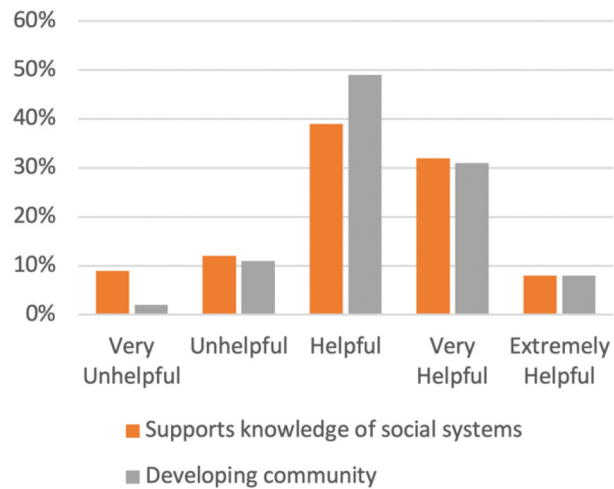


Figure 5. Educational value. Counts based on responses from 60 students to the questions: ‘Was the workshop helpful for supporting your knowledge of social systems in business?’; ‘How likely is it that principles from these workshops will help you to develop a stronger sense of community at Brunel?’.



emotional intelligence and decision making processes (Zhou et al., 2020). In line with these aims, this study set out to evaluate a model that promoted inclusive and meaningful social experiences that would enable the development of team based psychological safety. The Art of Wellbeing in Education intervention introduced approaches to education that were experienced by students as acceptable and relevant to their studies. The approach used arts and employed creative approaches already widely used in universities (Bramwell et al., 2011; Gibson, 2010). For example, Terry et al. (2010), suggest that from their investigations, creative teaching is not only preferred by students, but also produces more effective results. The findings offer a good rationale for integrating creative practice more widely. Another reason why the acceptability of the intervention may have been so high, may be because embedding creative teaching within a socioecological framework increases interaction between students in a safe way, allowing for adaptation and responsiveness. This is also confirmed in a study by Ren et al. (2022), suggesting social interaction is a key factor underpinning student wellbeing.

This paper argues that the problem is not only a personalised individual issue but one that needs to be considered within a socioecological context whereby teaching models, the learning environment, student engagement and multistakeholder involvement are essential to the success of the intervention impacting on wellbeing.

Due to the complexity of the problem, this makes a logic model a particularly valuable tool for describing the change process, however, to date the authors are not aware of any logic models that have been developed for integrating wellbeing interventions within a university environment. Therefore, the logic model that is being presented here may be a valuable asset for any university wanting to develop a more integrated approach to supporting student wellbeing and mental health within a socioecological framework that considers the whole context, rather than just the individual. This study has implications for teaching practice, in that the approach includes changes to the learning environment which may be challenging for traditional teaching which often commodifies learning and positions creativity within the learning domains of productivity and efficiency rather than social, cultural and compassionate ways of learning (Nayak, 2022). Longer term aims for the initiative are to use a socioecological approach to encourage collaboration and equality partnerships between universities, families, and communities, and particularly the interdisciplinary environment within which most businesses, companies and people thrive. Considering the broader context, a socioecological framework can increase awareness and understanding of the factors that contribute to student mental health and wellbeing. Given the comparatively high prevalence of mental health issues and poor wellbeing in universities, this study should offer a viable way forward, integrating creative approaches to addressing wellbeing with the student population.

5. Limitations and future research

Whilst there are significant strengths to the study, for example the intervention design and take up, there are also several limitations. Universities all function differently, with programme design and delivery offering significant variation in approaches. Integrating creative approaches into the curriculum can be challenging, as they may not align with traditional teaching methods and may require a significant shift in the culture and priorities of the institution. This study focused on business study students, and therefore the replication of the study in other subject areas would help to determine acceptability of the intervention in other study areas such as the arts, engineering, and health. Consequently, the generalisability of the model is unknown across institutions and subject areas. Further to this, whilst there is evidence to support the effectiveness of some creative approaches (Cornish, 2007; Gibson, 2010), further research is needed to establish their efficacy and impact in the context of a socioecological model. Future research should also focus on addressing these limitations by ensuring that standardised measures and best practices for implementing creative approaches within the education setting are aligned with a cogent theory of change as outlined in the logic model in this study. Another limitation is that this study evaluated short term outcomes, and therefore longitudinal studies should also be conducted to investigate the effectiveness and impact of this type of intervention on student wellbeing in the long term.

6. Conclusion

Our study investigates the development and evaluation of a logic model that describes the change process for a creative wellbeing intervention. The four domains of evaluation were related to delivery, acceptability, educational value and the impact on psychological safety. Our results indicate a positive impact on all areas that we evaluated. The study was designed to respond to the challenges for universities to find effective models of wellbeing and mental health promotion where the change mechanisms are complex and the conceptualisation comprises interdependent constructs. The findings were promising, indicating that an interactional, arts-based model underpinned by a creative socioecological theory of creative teaching can produce a positive result for psychological safety, acceptability, delivery and educational value within a business education environment.

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Disclosure statement

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Authors' contributions

xxx conceptualized and developed the paper, provided funding acquisition, investigation and project administration as well as supervision of the project and also wrote and drafted the original paper. xx proofread, provided project administration and supported analysis. xx provided conceptualisation, review and editing the paper.

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