Received: 10 March 2025 | Accepted: 10 October 2025

DOI: 10.1002/curj.70013

ORIGINAL ARTICLE

The Curriculum Journal BERA

Exploring university student perspectives of a challenge-based curriculum

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Abstract

The world faces multiple global and local challenges, with some describing one challenge, climate breakdown, as an existential threat. Publications in this journal have highlighted the importance of curricula that help students better understand and address these challenges. Delivering more challenge-based learning experiences may require changes at multiple levels, but as an initial step, this research gathered preliminary data as part of an aspirational co-design process. Importantly, students were a key part of the research team as co-researchers, and data were collected from student participants. Using mixed methods, the study explored: (i) how important students feel specific challenges are; (ii) if they feel their current curricula help them navigate these challenges; (iii) whether they would like to have optional challenge-based learning; and (iv) how this learning could be delivered. In more detail, 61 students from one UK university rated and commented on 30 challenges from existing peer-reviewed research. While all 30 challenges were, on average, rated as important, the challenges rated as most important concerned: (i) mental health and well-being; (ii) prejudice, intolerance, and inequality; and (iii) the climate and wider ecological emergencies. However, students were less sure that their current curricula helped them understand and tackle these challenges, and so, perhaps understandably, wanted further learning opportunities. Qualitative data showed a wide variety of views on what format this additional learning should take—but little to no consensus. The discussion considers the tensions inherent in these results, especially

in terms of addressing power and politics, and potential issues this may pose both for students and universities operating in an increasingly market-led and polarised environment. The paper concludes with four tentative recommendations for researchers, funders, leaders, policymakers, and parliamentarians who seek to make a more challenge-based curriculum a reality.

KEYWORDS
challenge-based curriculum, global challenges, higher education, local challenges, mixed methods, university students

INTRODUCTION

A recent review published in The Curriculum Journal explored how meeting global challenges may require transformations in both curriculum and pedagogy (Markwick & Reiss, 2025). In their work, Markwick and Reiss begin by comparing and contrasting the curriculum approaches of Young (2014) with Reiss and White (2014). Then, building on these foundations, the authors argue that today: 'a curriculum must equip learners with the knowledge they will need to engage with the global issues of their time' (p. 4). The current article moves the debate from the school sector, where Markwick and Reiss situate their review, to the UK higher education sector. As such, this paper begins an aspirational curriculum co-design process where, using student researchers, it collects students' views about: (i) the importance of different global and local challenges, (ii) if students feel their current curricula will help them navigate these challenges; (iii) whether they would like optional challenge-based learning experiences; and (iv) how this learning could/should be delivered.

In terms of setting the context for this work, it is worth highlighting some of the challenges citizens of the modern world, and the planet itself, face. These include multiple historic and emerging global and local challenges. At the forefront of many minds, the climate and ecological emergencies lead many to offer severe warnings about the continuation of life on earth as we know it (Oskamp, 2000; WWF, 2022). With recent work describing this challenge as an existential threat (see Ripple et al., 2023). In response to the above, many universities have declared climate and ecological emergencies, and students in the southwest of England initiated a partially successful campaign to include mandatory climate change education across all courses (BBC, 2023; Massoudi, 2022).

Of course, multiple other challenges exist. And today researchers connect some of these together using the title 'polycrisis' (Heinberg, 2024; Lawrence, 2024; Lawrence et al., 2022), while others use the term 'overshoot' (e.g., Rees, 2023). 'Overshoot' is the idea that, driven by assumptions of and demands of modern techno-industrial society, we are consuming the earth's resources and polluting it at a much faster rate than the planet can cope with: hence overshoot. Alongside more environmental challenges, prejudice remains a pertinent issue, and there has been a mainstreaming of discussions of systemic racism following the death of George Floyd and the subsequent Black Lives Matter movement. In the UK, this has resulted in controversy around the original names of university buildings, statues commemorating the British empire, and positive moves to decolonise university spaces and curricula (Winter et al., 2024).

At the same time, while Markwick and Reiss (2025) note that schools have become more market-led (p. 4), this is arguably even more the case with universities. Universities in the

UK need to balance: (i) maintaining their commercial competitiveness in the recruitment marketplace, (ii) fulfilling their public duty, and (iii) contributing to addressing the global and local challenges mentioned above.

In promotional material to staff and students, universities often note their focus on: 'solutions', 'change-making', and 'transformation'. More than this, universities suggest that their students will themselves become the catalysts of more positive futures. For example, the University of Bristol (2023) stated that 'our students, graduates and researchers are committed to making a positive impact, collaborating on projects that inspire social, political and cultural change'. The University of Glasgow (2023) invites prospective students to 'Meet our world changers' and presumably become one of them in the future. Solving global and local challenges is a key part of what our universities enable students to do.

While many students chose higher education generally and individual institutions specifically to become part of the solutions to the challenges we face, it remains unclear the degree to which students feel they are being adequately prepared to navigate and address these varied and complex challenges. Anecdotal reports suggest that traditional subject-specific curriculum may not always provide the breadth or depth of understanding students hope for to become change agents.

Both the university generally (Humboldt, 1970; Maskell & Robinson, 2012) and its approach to curricula specifically have changed over time (Dewey, 1916; Warren, 2002). Moreover, the debate over what curricula actually represents still continue (Fraser & Bosanquet, 2006). Today, in the UK, curricula tend to be formed around subjects. The Quality Assurance Agency for Higher Education (QAA) has a key role in producing benchmark statements for them, and these documents provide detail about what students should know and be able to do by the end of their degree. While this ensures standards and consistency, as do other frameworks such as those for Higher Education Qualifications of UK Degree-Awarding Bodies, they may also somewhat limit a more challenge-based curricula approach. While benchmark statements do allow for some flexibility within and even between some subject areas, the interdisciplinary nature of global and local challenges and any future challenge-based curricula may find the current subject-based focus constraining.

As a result of the above, we sought to start a *preliminary, aspirational, co-design* process with students to explore the match between their current curricula, the challenges faced, and the desired format of any future challenge-based curricula delivery in UK higher education. We deploy the expressions 'preliminary' because we aimed to gather initial thoughts, 'aspirational' because as yet we are some distance from being able to implement this. And yet still, as much as possible, co-design – as if we are entrusting our students to solve the global and local challenges they did not cause, we should also allow them to be active participants in shaping the learning that may enable them to do more (McCulloch, 2009). As such, we gathered data exploring four research areas:

(i) The perceived importance of global and local challenges
(ii) The suitability of current curricula to meeting them
(iii) Receptiveness to the idea of an optional challenge-based curricula
(iv) The possible delivery format of any future learning

METHODOLOGICAL AND ETHICAL CONSIDERATIONS

Orientation

The research team consisted of two academics and two student researchers within the host institution. In the spirit of co-design, the undergraduate student researchers were key in

centring the student voice in the construction, delivery, and write-up of this research. Their time was paid for through an internal university grant. The student researchers also played a key role in accessing student communities for potential participants. More widely, it also enabled the student researchers to develop their research experience prior to undertaking their final year dissertations. The two academics were based within Education (AM) and Psychology (MT) subject areas. Both student researchers were based within Education. The research team approached this project using the lens of critical realism (Bhaskar, 1975; Maisuria & Banfield, 2022).

Participants

Potential participants were students at the host institution who were recruited via course-wide e-mails, notifications placed on virtual learning environments, face-to-face presentations given by the student researchers, and snowball sampling. No payment or credit was provided for participation. Data from 61 participants were included for analysis. A small number of participants only provided data on one set of ratings, that is, (i) 'importance', not (ii) 'learning will help'. Rather than deleting this partial participant data, incomplete participant data are included where it can be, and removed where necessitated by statistical analysis. This reduces participant' numbers to 56 in some parts of the analysis, as noted in the results section.

The average age of the 61 participants was 24.9 years (SD = 6.8). In terms of gender, 69% of the sample identified as a woman, 30% as a man, and 1.6% ($n = 1$) preferred not to say. In terms of participant demographics, 10% of the sample were in their first year, 56% in their second, 15% in their 3rd year, with 13% enrolled in postgraduate courses. Of the remaining sample, 6% were enrolled in foundation years or Early Years Initial Teacher Training courses. In terms of participant location within the four faculties of the university, 36% were based in the Arts, Creative Industries and Education faculty, 31% in Health and Applied Sciences, 18% in Environment and Technology, and 15% in Business and Law. While we collected data on participants' subjects of study (i.e., Architecture, Arts and Humanities, Business, Education, Engineering, Law, Medicine and Health Sciences, and Social and Behavioural Sciences), 28% of the sample chose the 'Other (please state)' box. As such, we will not present a fuller breakdown of participant subject area.

Procedure

The study sought student perspectives on future curricula influenced by global and local challenges. We wanted to find out: (i) how important students felt these challenges to be; (ii) if they felt their current curricula would help them understand and tackle them; (iii) if they would like more challenge-based learning; and (iv) what format these learning opportunities should take?

The research was conducted through an online Qualtrics survey. First, students read an information sheet and consented to take part. On the information sheet, the study was framed in the following terms: 'We are conducting research to explore the perspectives of [institution name] students about local and global challenges. We want to find out how much knowledge students feel they have about these issues and if students would like their degrees to help them better navigate them'. The study then presented participants with a list of 30 global and local challenges in the form of statements. These challenges were based on previously published peer-reviewed research where academics generated lists of both environmental and wider social challenges (Thompson et al., 2023). Participants in the current study were

asked to rate the challenges in terms of both: (i) their 'importance', and (ii) the degree to which participants felt that their current learning at university will help them understand and tackle them ('current learning will help'). Responses were given on a 5-point Likert-type scale (see Gries et al., 2018) with anchor points: 1 (strongly agree) and 5 (strongly disagree). Having rated the challenges, participants were then asked how helpful it would be for their university to provide students with optional, additional learning opportunities to understand more about these challenges and how they could be addressed. The response was again on a 5-point Likert-type scale: 1 (very helpful) to 5 (very unhelpful). Two further open-ended questions asked for explanatory comments on two areas. First, feedback on the challenges themselves and how university learning will/will not help students understand and address them. Secondly, a question about what format any additional learning should take.

Ethics

Ethical permission was granted by the host institution. An 'ethic of respect' and 'trust' were carefully considered (BERA, 2018, p. 11). As noted earlier, the research team consisted of two academics and two student researchers. As the academics had possible professional relationships with potential participants through teaching/supervision, none of the academic researchers had individual contact with potential participants at the recruitment stage (BERA, 2018 p. 19, point 19). Instead, potential participants were approached via our student researchers or via messages posted on virtual learning environments. Moreover, we decided to conduct the research via an online and anonymous questionnaire where participants chose to take part and give voluntary informed consent in their own time. All these measures were designed to mitigate against the possibility of participants feeling pressured to take part and avoid power dynamics unduly influencing individual participants or their responses.

Analysis plan

The results below contain two broad sections: first, a more quantitatively focused analysis and then a more qualitative one. Together, this works through the four research areas highlighted earlier.

Areas 1 and 2. Initially, descriptive data containing: rank, mean, and standard deviation scores for both 'importance' and 'current learning will help' will be presented for each of the 30 challenges. Correlations between the two sets of scores will be examined. Then the average score across all challenges for both 'importance' and 'current learning will help' will be calculated and compared using a paired samples *t*-test. As this single comparison risks reducing the combined data too greatly, more descriptive patterns between challenges will also be explored.

Area 2. A single quantitative question asks participants if they would like additional challenge-based learning opportunities. This is examined using a one-sample *t*-test.

Areas 3 and 4. Then moving onto the more qualitative material, two open-ended questions asks students for further open feedback on (i) the challenges and if current learning will help, before exploring (ii) their ideas on the format any future learning should take.

The qualitative data are expected to be brief but still informative. It will be examined using thematic analysis (TA). TA has flexibility in terms of theory and epistemology (see Braun & Clarke, 2006). It involves 'searching across a data set… to find repeated patterns of meaning' (p. 86) using six phases. Specifically: 1. and 2. Transcribing, if needed, and familiarisation with the dataset, 3. initial coding, 4. searching for themes, 5. reviewing and

refining themes, and 6. reporting the analysis. In this TA, a semantic and inductive approach will be employed (Braun & Clarke, 2006). Sticking close to the data and being led by its contents, it is hoped we continue to centre the student voice. Multiple authors will contribute to the TA with agreement on the final theme structure and representative quotes reached through discussion and refinement. The results will prioritise focusing on thematic content which is mentioned most frequently, while also highlighting other notable or striking content. As always with research of this kind, other research teams might produce other plausible structures from the same data.

RESULTS AND INITIAL DISCUSSION

Quantitative data

Table 1 (below) shows the challenge statements, ordered by their mean importance score and descriptive statistics in terms of both 'Importance' and 'Current learning will help' ratings.

All challenge statements were rated twice from 1 to 5 (1: strongly agree, 5: strongly disagree) in terms of both importance and current learning will help. Data from Table 1 show a broad positive correlation between the importance and the current learning will help scores. Examining this more closely, a significant, large, positive correlation was found ($r = 0.52$, [1000 bootstrap 95% CI range 0.20–0.75], $p = 0.004$). So generally, as one score increased so did the other. However, what is also noticeable from Table 1 is that the mean values for importance scores sit on a range from 1.49 to 2.34. While the same mean values for current learning will help sit on a range from 2.07 to 3.27. This tends to suggest that participants agreed that the challenges were important, but were more neutral about whether their current learning at university would help them understand and tackle them.

Examining this more closely, we calculated the average of both importance and current learning will help scores for all challenges combined. First, we removed participants with any missing data, taking participant numbers down to 57. On the 1–5 scale (1: strongly agree, 5: strongly disagree), the average score for importance was 1.79 (SD 0.51), and the average score for current learning will help was 2.63 (SD 0.52). A paired samples *t*-test found that the average difference ($n = 0.84$) was significant, $t(56) = -8.21$, $p = <0.001$, and represents a large effect size (Cohen's d = −1.61).

However, it is also worth looking at the patterns of scoring around the challenge statements more closely, both in terms of individual ratings and the two scores in relation to each other.

First, in terms of the importance ratings, the most important challenges for participants were around:

(i) Mental health and well-being
(ii) Prejudice, intolerance, and inequality
(iii) Concerns over the climate and wider ecological emergencies

Bearing in mind that all statements scored below 2.35 in terms of importance (and the midpoint on the scale was 3.0), even the relatively less important items were on average seen as important by participants. Arguably, the less highly rated but still important statements included items that students might understandably, as yet, feel less immediately connected to, for example, issues around ageing and public health.

Also noticeable in terms of their lower importance scoring was a cluster of five statements that capture broader economic and political issues and their possible ramifications. Specifically:

TABLE 1 List of challenges ranked by mean importance score and corresponding 'Importance' and 'Current learning will help' data.

		Importance			Current learning will help		
No	**Challenge statements**	**Rk**	**Mn**	**SD**	**Rk**	**Mn**	**SD**
23	Mental health and well-being issues (e.g., increases in depression, anxiety, and suicidal ideation)	1	1.49	0.72	3	2.13	0.99
26	Racial, ethnic, and religious intolerance	2	1.53	0.75	1	2.07	0.78
6	Discrimination, intolerance, and prejudice generally	3	1.57	0.83	2	2.11	0.76
5	Climate change and its impacts	4	1.59	1.01	15	2.66	1.13
10	Environmental loss and damage (e.g., deforestation, threats to animals and plants)	4	1.59	0.97	23	2.84	1.11
17	Inequality within society in general (e.g., income inequality, social inequality)	4	1.59	0.76	5	2.30	0.89
29	The effects of various forms of pollution (e.g., air, water, plastic)	7	1.61	0.74	21	2.77	1.04
1	Access to health and care (e.g., reduced funding, long waiting times)	8	1.63	0.82	18	2.70	1.22
28	The challenge of living sustainably (e.g., reducing consumption, energy sources and use)	9	1.64	0.86	17	2.70	1.13
16	Inequality related to gender (e.g., sexism, misogyny)	10	1.66	0.75	10	2.45	0.95
8	Educational inequality (e.g., access, quality, fees)	11	1.67	0.79	4	2.27	0.96
15	Increased pressure in the workplace (e.g., stress, work-life balance)	12	1.69	0.83	16	2.70	1.08
11	Fear of violence (e.g., violent crime, sexual assault)	13	1.70	0.84	14	2.64	1.10
21	Lack of affordable housing	13	1.70	0.88	28	3.05	1.13
25	Poverty and the impact of living with it	15	1.72	0.84	19	2.71	1.02
22	Loneliness and social isolation	16	1.74	0.81	9	2.45	1.01
27	Technology and its impact on human behaviour (e.g., social media, privacy, automation)	17	1.75	0.89	7	2.38	0.98
14	Household financial issues (e.g., debt, the rising cost of living, economic insecurity)	18	1.75	0.62	25	2.91	1.00
13	Government policies leading to austerity and cuts to the welfare state	19	1.83	0.81	11	2.60	0.96
24	People feeling disempowered, displaced, and powerless	20	1.84	0.82	8	2.43	0.85
18	Issues of human migration and immigration	21	1.84	0.78	24	2.88	1.05
9	Employment issues (e.g., finding any work, finding secure work)	22	1.90	0.98	5	2.30	0.93
20	Issues related to public health (e.g., obesity, antibiotic resistance)	23	1.93	0.79	22	2.80	1.03

(Continues)

TABLE 1 (Continued)

No	Challenge statements	Importance			Current learning will help		
		Rk	Mn	SD	Rk	Mn	SD
12	Forms of capitalism that favour finance, corporations and elites (e.g., neoliberalism)	24	2.05	0.97	20	2.73	1.02
19	Issues related to an ageing population (e.g., health, care, retirement costs)	25	2.07	0.91	27	2.96	1.13
7	Dissatisfaction and distrust in the current political system	26	2.10	0.96	26	2.91	1.03
4	Brexit and its implications	27	2.15	0.95	30	3.27	0.92
2	An increase in individualism, self-interest, and a decrease in community cohesion	28	2.26	0.89	13	2.61	0.91
30	The threat of war and other conflicts (e.g., civil, global, nuclear)	29	2.30	1.07	29	3.20	0.92
3	An increase in populism and far-right political views	30	2.34	0.96	12	2.61	0.85

Note: Participant numbers: importance ratings $n = 60–61$, learning will help ratings $n = 56–57$.
Abbreviations: Mn, mean; RK, rank; SD, standard deviation.

(i) Forms of capitalism that favour finance, corporations and elites (e.g., neoliberalism).
(ii) Dissatisfaction and distrust in the current political system and politicians.
(iii) Brexit and its implications.
(iv) An increase in populism and far-right political views.
(v) An increase in individualism, self-interest, and a decrease in community cohesion.

Although all five statements were rated, on average, on the agree side of the agree/disagree continuum, it is of note that all five of these statements appeared with the bottom seven statements of Table 1 in terms of importance.

In terms of the 'current learning will help' data, there are some interesting additional patterns. First, while issues around the climate and ecological emergency (items 5, 10, and 29) were rated highly in terms of importance, they ranked much less highly in terms of 'current learning will help'. Indeed, the change in ranks between the two scores shows some of the biggest drops between importance and current learning will help (similar patterns were also found for items 1. access to health care and 21. lack of affordable housing).

A reversed pattern can be seen with some other statements where items are rated more modestly in terms of importance but are positioned higher in terms of learning will help. This applies to some of the items concerned with broader economic and political issues mentioned earlier:

- *An increase in populism and far-right political views (importance: 30th, learning: 12th)*.
- *An increase in individualism, self-interest, and a decrease in community cohesion (importance: 28th, learning: 13th)*.
- *Employment issues (e.g., finding any work, finding secure work) (importance: 22nd, learning 5th)*.

A final quantitative question asked: 'How helpful do you feel it would be for [the university] to provide students with optional additional learning opportunities to understand more about these challenges and how they could be addressed?' The item was rated from 1 (very helpful) to 5 (very unhelpful). Of the 59 participants who entered data, the mean score was

1.66 (SD 0.80), suggesting such opportunities were wanted by participants. We conducted a one-sample *t*-test to examine if the result was significantly different from the neutral midpoint on the scale (3). The *t*-test results were significant $t(58) = 12.84$, $p = <0.001$, with a large effect size (Cohen's $d = 1.67$), suggesting that the participant scores were, on average, markedly different from the midpoint of the scale—students want additional learning opportunities.

Qualitative data

In terms of the qualitative data, participants were asked two questions:

1. *Do you have any comments about the task you have just completed? For example, any comments on: (i) the challenges included on the previous page? (ii) any challenges you feel are missing? (iii) how learning at [the university] will/will not help you?*
2. *Do you have any thoughts about what format this learning should take that would best enable students to understand more about these challenges and how to address them?*

Around half of participants ($n = 29$) entered comments in response to one or other question. Responses were brief, but patterns could still be discerned in the data.

Question 1

About 23 comments were provided with an average response length of 228 characters/39 words. Most comments ($n = 11$) were made about how the participants' subject of study intersected with some of the challenges. For example, that their degree was appropriate in terms of teaching about challenge X but less good about challenge Y. For example:

> As I am studying a science degree, social issues are not raised in lectures or tutorials, therefore, I am un[a]ware of the issues and challenges around me.

> I think my learning at [this university] will help to understand challenges relating to mental health, social injustices and climate change, but that I am less informed on challenges relating to politics, economics and wider social structures.

It should also be noted that some students were very positive about their degree topics and still wanted more, for example:

> As a computer science student, there is so much that my field can do to address those issues and help in developing solutions to tackle them, and [the university] needs to have technology students be more involved in working to find new solutions related to those issues

Responding to the challenges themselves, at a more general level, two of the shortest comments reflected that some participants felt the survey was biased politically:

> I feel that there was a left-wing bias in this survey

> Questions are politically biased on issues relating mostly to left policy

The participants did not elaborate on why they perceived this bias. Moreover, in two other comments, one participant seemed to suggest that the survey was not radical enough, another that universities might struggle to bring about change due to its position as a business within society.

> I believe some of the challenges are not significantly important to be occupying any space in the crucial societal discussions. Instead that space should be allocated to more pressing issues such as the lack of power for people.

> Is it up to [the university] to tackle these problems? Universities by their nature uphold some of these challenges, and I doubt [the university] will be able to make a large impact on fighting these challenges when universities are ran as a business. These issues run deep.

It is worth noting that even though participants were explicitly asked to highlight any perceived missing challenges, no participants did so.

Question 2

In terms of question 2, regarding learning format, 24 participants made comments. Here, the average response length was 173 characters/28 words. What was most noticeable was the diversity of opinion.

While the most preferred format was for learning to be online ($n = 10$), nearly as popular was for learning to be delivered as workshops or seminars ($n = 8$). This is in contrast with the lecture format, which was only mentioned ($n = 4$) times. An additional two comments talked specifically about other more open formats where students could make up their own minds. One participant said:

> Gearing the learning to not be lectured, give students opportunity to form their own opinions by interpreting evidence. It would be too easy for an instructor to project their own opinions and also risks radicalisation.

The above comment is in contrast with multiple other participants who wanted talks from expert individuals or organisations ($n = 5$). Some other participants ($n = 3$) also highlighted the importance of students talking about these issues among themselves perhaps in student societies.

> Societies where people can talk about these social issues. Or an hour in the timetable each week to go over concerns or queries about the things listed.

Finally, there was diverging opinion about whether this material should be delivered in a format that was opt-in/voluntary and accessed in students' own time ($n = 6$), or something that should be integrated into the course ($n = 3$), or even something that should be more formal stand-alone courses ($n = 2$). In short, in terms of learning format, there was a significant diversity of opinion.

GENERAL DISCUSSION

Following a recent call in this journal to explore what more challenge-based curricula would look like, we involved university students as both researchers and participants in the preliminary stages of an aspirational curriculum co-design process focusing on global and local challenges. Quantitative ratings were given both in terms of the perceived importance of

specific challenges and whether current learning would help students understand and tackle them. On average, all challenges were rated as important (research area one), but the degree to which current learning was thought to help was rated significantly lower (research area two). At the same time, while quantitative results showed student participants were keen to explore challenge-based learning (research area three), accompanying qualitative data revealed no clear pattern in terms of how they would like this learning to be delivered, nor where it should take place (research area four).

It is important to note that while all challenge items were rated as important, challenges around (i) mental health and well-being; (ii) prejudice and intolerance; and (iii) the climate and wider ecological emergencies topped the list. Moreover, there was a generally strong, positive correlation between the importance of items and their learning will help scores. That said, while all challenges were considered important, there was generally a decrease in ratings between their importance and the extent to which students thought their current learning will help.

There are several possible explanatory reasons for this. First, a mismatch between subject-based curricula and the challenges we face. While subject-specific degree curricula may touch on or go into some detail on some aspects of some challenges, it will naturally miss wider aspects and connections. Current subject-specific curricula are unlikely to help students understand and tackle any one challenge in its totality or many challenges broadly. Hence the potential need for a more challenge-based curricula. The consistent gap, for example, between the perceived importance of items related to the climate and ecological emergencies and the lesser degree to which students felt their current learning was going to help was noticeable. This is supported by the recent call for a university-wide course on climate change noted in the introduction (Massoudi, 2022).

In addition, there is another option in terms of how the lower ratings for 'current learning will help' may be explained. Participants were asked about 'the degree to which you agree your learning at [the university] will help you understand and tackle' the challenge. The difference between 'understand' and 'tackle' may be important. Participants may be suggesting that increased individual learning about the challenges might increase understanding but might not be enough to help tackle the issues themselves. It could be that students are suggesting that individual learning will be of limited use in the face of actually changing the things that need to change. This may be especially relevant around climate change. While more learning on the topic might help students understand the complex issues involved, it may not immediately help resolve the issue. There are arguably many currently intractable problems involving multiple powerful stakeholders. The same issue could be illustrated with a more local challenge: 'lack of affordable housing'. While understanding may be increased about the issues involved, this may be different from the extent to which students are then able to actually make houses more affordable. In both cases, the lower 'current learning may help' scores might hint at the difference between increasing individual levels of knowledge through curriculum changes and the further steps needed to change things in the real world. This is specifically about the feasibility of changing systems and holding power to account with observable results. Indeed, Markwick and Reiss (2025) hint at this when they highlight the role of 'agency' not just in terms of gaining knowledge, but also in terms of being able to bring about solutions.

Discussions of this type tap into the role of broader economic, systemic, and political issues. Such topics directly formed some of the 30 challenges presented to participants. Of interest, participants generally scored these challenges lower than other items in terms of importance—and yet these wider challenges are arguably both (i) very important in their own right and (ii) impact the solutions to many other challenges. Tackling the challenges we face seems to require talking about and acting on political topics, broadly defined. And yet politics inside and outside the university is becoming increasingly polarised and acrimonious.

Moreover, including political content around challenges may feel very different to students from different subject areas. For example, it may be normal for the student familiar with a subject-based curricula based in the arts, humanities, and social sciences, but less normal for those studying STEM subjects. However, if fundamentally, to tackle global and local challenges, students need to be better able to 'read the world' (e.g., Freire, 1996), then increasing understanding and discussion of broader economic, systemic, and political issues areas is vital to achieve change.

Indeed, such thinking is highlighted by Markwick and Reiss (2025) in noting that education can tend to legitimate dominant cultures and instead must be transformed to increase students' understanding of dominant societal groups in the interest of social justice (p. 4). Building from Young, they suggest moving beyond 'powerful knowledge' to instead increasing 'knowledge of the powerful' (p. 5). We agree, and at the same time, our data suggest this may not always be straightforward. In contrasting material in the qualitative data, two participants felt that the challenges they rated were too 'left wing'. While others questioned whether the corporate nature of today's university would be able to tackle these issues at an appropriate level. There seems to be an interesting and important tension to be explored here.

A final potential tension is between student participants indicating that they wanted additional learning—but having no clear consensus on what form that learning should take. Some wanted to hear from experts, while others thought expert instruction might radicalise students. Moreover, at a time when it appears that increasing numbers of students have internalised a need to be assessment focused and outcome driven (Thompson et al., 2021, 2022)—if any new challenge-based curricula is only optional (as suggested in our study), sitting in parallel to more traditional subject-based activities—what would the student uptake and engagement be? If instead, institutions try and integrate new curricula into existing subjects of study as defined by the QAA and subject-benchmark statements—what will the merging of subject-based and challenge-based curricula produce?

Limitations and future studies

This study sought to gather preliminary data, involving student researchers and student participants at the start of an aspirational curriculum co-design process focused on addressing global and local challenges. The study explored student perceptions within one UK university, with a relatively modest number of participants deliberately spread across subject areas. Whether the data would look similar if it was gathered from other single or multiple university sites is an interesting empirical question that deserves to be investigated. Collecting larger comparative samples across multiple universities would be one way to develop research in this area. Future research, adopting similar methods, may also choose to explore whether and how any demographic variables or participants' subject of study influence responses towards challenge-based curricula. Moreover, collecting information on whether students are domestic or international students could provide useful additional information, as would how views differ depending on the participants' year of study (from foundation year to postgraduate education).

The global and local challenges we face change over time. The original list of challenges used in this study (Thompson et al., 2023) was formed before the conflicts in Ukraine and Israel–Gaza, and the re-election of Donald Trump, all of which have shifted the geo-political landscape and perceptions of feasible change. In the time since, political, geo-political, and national shifts have seen the resurgence of far/hard-right activity. This may have intensified the appeal of a challenge-based curriculum for some, while others may have become

(more) apathetic about the future. Any list of challenges used in the future research could be adapted to reflect current issues.

As noted earlier, should future research wish to closely mirror the approach of this study, it should explore what students are answering in terms of 'current learning could help'. Is it that learning more would increase understanding alone, or that learning more would lead to change in the real world? Both matter – but arguably the latter matters more. It should also be remembered that, as participation was voluntary, participants chose whether to take part in this research or not. This may have biased the sample towards those more interested in the possibilities presented by a challenge-based curricula.

Some may note potential shortcomings with a survey-based approach and predefined list of challenges. They may instead focus on a more open and qualitative-based approach from the start, where students focus on challenges that they generate. Future research following such formats could involve student focus groups or further co-creation panels. Of course, approaches like this would tend to remain local, be more resource-heavy, and potentially more subject to group influence (see Smithson, 2000). Whatever approach is chosen, it is hoped that, in time, with necessary institutional buy-in, future work will advance towards the development and deployment of actual specific challenge-based learning experiences that can be evaluated, and if successful, rolled out more widely.

In the meantime, one of the most important directions for future research is to continue to explore the adequacy of our current subject-based curricula in terms of helping our students both fully understand and then be part of tackling the global and local challenges we all face. If, as suggested by previous research published in this journal (Markwick & Reiss, 2025) and the findings of this new research, curricula change is needed—this needs to be further explored, piloted, and disseminated (see recommendations below).

The results of this study specifically suggest that more work may be needed to explore teaching around the broader economic and political issues that are central to many global and local challenges and their possible solutions. More challenge-based learning, which necessarily grapples with power and political issues, may result in certain tensions for both students and even for universities. Some students may find considering some of these aspects taxing, either in terms of their own beliefs, the neutral backdrop of their existing subject-based curricula, or as they try to balance their personal focus on passing assessments and securing future career opportunities on the one hand (Thompson et al., 2021, 2022), with helping to tackle the global and local challenges we all face on the other.

In terms of universities, they may also struggle to find a balance as they seek to position themselves both as change-makers and commercial businesses operating in a competitive, international corporate marketplace. Maybe, as suggested by one participant in this study, questions even need to be asked about what type of solutions universities are capable of advocating for, when comparing some of the challenges and solutions on the one hand, with the importance of universities maintaining their market position on the other. Are some challenges and solutions more palatable than others?

None of the above factors are reasons not to pursue future research or teaching and learning innovation. Indeed, such tensions highlight the potential importance of continuing this work as we start to explore what a more challenge-based curriculum might look like across all education sectors, starting from compulsory school to higher education. Markwick and Reiss (2025) note in their conclusion: 'we need an urgent educational reform that formulates and delivers curricula that engage students in acknowledging and exploring current and potential global issues' (p. 11). We strongly agree and hope that this article provides one small step in the wider journey of making the above a reality.

Final recommendations

This article advances the literature in terms of gathering preliminary, mixed methods data about the potential need for and format of challenge-based curricula within higher education in the UK. As well as focusing on student participants, the research further centred the student voice by involving student researchers as key members of the research team from the inception of this project. While this study provides no easy answers, the findings consistently show support for continued moves towards more challenge-based learning experiences.

The more the sector explores the possibilities of what a challenge-based curriculum could look like, the more issues will be presented and need to be wrestled with by both education staff, administrators, and students, along with those who guide the sector through policy and funding. We conclude this article with tentative recommendations that might help advance tomorrow's challenge-based curriculum.

1. Education leaders begin a programme of work designed to explore the enablers and barriers of implementing a challenge-based curriculum for their students. This must a be long term, collaborative and strategic project. It must be responsive to the needs of different education sectors, students and also the wider political environment.
2. Policymakers and parliamentarians to debate the benefits of a challenge-based curriculum and how the current education policy landscape may present barriers. For example, in higher education, while the Quality Assurance Agency and subject-benchmark statement are designed to be flexible, the current subject focused configuration may present barriers.
3. In all sectors, Department for Education, Office for Students, and research councils should encourage challenge-based curriculum expansion. This could be through funding and guidance to promote innovation in the development and implementation of tomorrows challenge-based curricula.
4. Academic associations and learned societies could offer opportunities to share research and practice that is developing challenge-based curricula, both locally and from around the world. For example, van den Beemt et al. (2023) highlight recent examples of challenge-based learning in locations, including China, Ireland, Mexico and the Netherlands. More intervention based research on the perceptions of, acceptability of and outcomes of such curricula should be conducted and reported according to the latest standards (e.g., Upsher et al., 2025).

We conclude by suggesting that more discussion, research, innovation, evidence, policy, and resources are going to be important in moving forward a challenge-based curriculum which, if possible, could be to the benefit of all.

FUNDING INFORMATION
This research was partly funded by a Pedagogic Project/Student Partnership grant from UWE Bristol.

CONFLICT OF INTEREST STATEMENT
There is no financial interest or benefit that has arisen from the direct application of this research.

DATA AVAILABILITY STATEMENT
Data supporting this study will be available from the Open Science Framework (https://osf.io/) following publication.

ETHICS AND INTEGRITY POLICIES

We confirm that the research presented in this article was carried out with due consideration to all relevant ethical issues and in line with BERA's Ethical Guidelines for Educational Research.

GEOLOCATION INFORMATION

Data was collected online from students at UWE Bristol, United Kingdom.

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REFERENCES

BBC. (2023). UWE Bristol first in the UK to introduce climate change course. https://www.bbc.co.uk/news/uk-england-bristol-66867300

BERA. (2018). *Responsibility to participants. Ethical guidelines for educational research*. British Educational Research Association. https://www.bera.ac.uk/publication/ethical-guidelines-for-educational-research-2018

Bhaskar, R. (1975). *A realist theory of science*. Routledge.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Dewey, J. (1916). *Democracy and education*. Columbia University Press.

Fraser, S., & Bosanquet, A. (2006). The curriculum? That's just a unit outline, isn't it? *Studies in Higher Education*, *31*(3), 269–284.

Freire, P. (1996). *Pedagogy of the oppressed*. Penguin Books. (Original work published 1970).

Gries, K., Berry, P., Harrington, M., Crescioni, M., Patel, M., Rudell, K., Safikhani, S., Pease, S., & Vernon, M. (2018). Literature review to assemble the evidence for response scales used in patient-reported outcome measures. *Journal of Patient-Reported Outcomes*, *2*, 41. https://doi.org/10.1186/s41687-018-0056-3

Heinberg, R. (2024). From climate crisis to Polycrisis. *World Literature Today*, *98*(2), 32–36. https://doi.org/10.1353/wlt.2024.a920893

Humboldt, W. V. (1970). On the spirit and organisational framework of intellectual institutions in Berlin. *Minerva*, *8*(2), 242–250. (Original work published 1810).

Lawrence, M. (2024). Polycrisis in the Anthropocene: an invitation to contributions and debates. *Global Sustainability*, *7*, e5. https://doi.org/10.1017/sus.2024.2

Lawrence, M., Janzwood, S., & Homer-Dixon, T. (2022). *'What Is a Global Polycrisis?' Version 2.0. Discussion Paper 2022-4*. Cascade Institute. https://cascadeinstitute.org/technical-paper/what-is-a-global-polycrisis/

Maisuria, A., & Banfield, G. (Eds.). (2022). *Working with critical realism: Stories of methodological encounters* (1st ed.). Routledge. https://doi.org/10.4324/9781003193784

Markwick, A., & Reiss, M. J. (2025). Reconceptualising the school curriculum to address global challenges: Marrying aims-based and 'powerful knowledge' approaches. *The Curriculum Journal*, *36*(1), 1–14. https://doi.org/10.1002/curj.258

Maskell, D., & Robinson, I. (2012). *The new idea of a university*. Andrews UK Limited.

Massoudi, H. (2022). Students Demand Mandatory Climate Change Education at University. Bristol247. https://www.bristol247.com/student/news-student/students-demand-mandatory-climate-change-education-at-university/

McCulloch, A. (2009). The student as co-producer. *Studies in Higher Education*, *34*(2), 171–183.

Oskamp, S. (2000). A sustainable future for humanity? How can psychology help? *American Psychologist*, *55*, 496–508. https://doi.org/10.1037/0003-066X.55.5.496

Rees, W. (2023). Overshoot: Cognitive obsolescence and the population conundrum. *The Journal of Population and Sustainability*, *7*(1), 15–38. https://doi.org/10.3197/JPS.63799953906865

Reiss, M. J., & White, J. (2014). An aims- based curriculum illustrated by the teaching of science in schools. *The Curriculum Journal*, *25*, 76–89.

Ripple, W. J., Wolf, C., Gregg, J. W., Rockström, J., Newsome, T. M., Law, B. E., Marques, L., Lenton, T. M., Xu, C., Huq, S., Simons, L., & King, D. A. (2023). The 2023 state of the climate report: Entering uncharted territory. *Bioscience*, *73*(12), 841–850. https://doi.org/10.1093/biosci/biad080

Smithson, J. (2000). Using and analysing focus groups: Limitations and possibilities. *International Journal of Social Research Methodology*, *3*(2), 103–119. https://doi.org/10.1080/136455700405172

Thompson, M., Blumer, Y., Gee, S., Waugh, L., & Weaver, Z. (2023). Climate change and community psychology: Exploring environmental and wider social challenges. *Psicologia di Comunità/Journal of Community Psychology*, *1*, 13–33. https://doi.org/10.3280/PSC2023-001002

Thompson, M., Pawson, C., Delfino, A., Saunders, A., & Parker, H. (2022). Student mental health in higher education: The contextual influence of "cuts, competition & comparison". *British Journal of Educational Psychology*, *92*(2), e12461. https://doi.org/10.1111/bjep.12461

Thompson, M., Pawson, C., & Evans, B. (2021). Navigating entry into higher education: The transition to independent learning and living. *Journal of Further and Higher Education*, *45*(10), 1398–1410. https://doi.org/10.1080/0309877X.2021.1933400

University of Bristol. (2023). Look to the future. https://www.bristol.ac.uk/

University of Glasgow. (2023). World Changer. https://www.gla.ac.uk/schools/ses/worldchangers/

Upsher, R., Dommett, E., Carlisle, S., Conner, S., Codina, G., Nobili, A., & Byrom, N. (2025). Improving reporting standards in quantitative educational intervention research: introducing the CLOSER and CIDER checklists. *Journal of New Approaches in Educational Research*, *14*, 2. https://doi.org/10.1007/s44322-024-00022-9

van den Beemt, A., Vázquez-Villegas, P., Gómez Puente, S., O'Riordan, F., Gormley, C., Chiang, F.-K., Leng, C., Caratozzolo, P., Zavala, G., & Membrillo-Hernández, J. (2023). Taking the challenge: An exploratory study of the challenge-based learning context in higher education institutions across three different continents. *Education Sciences*, *13*(3), 234. https://doi.org/10.3390/educsci13030234

Warren, D. (2002). Curriculum Design in a Context of widening participation in higher education. *Arts and Humanities in Higher Education*, *1*, 85–99. https://doi.org/10.1177/1474022202001001007

Winter, J., Webb, O., & Turner, R. (2024). Decolonising the curriculum: A survey of current practice in a modern UK university. *Innovations in Education and Teaching International*, *61*(1), 181–192.

WWF. (2022). In R. E. A. Almond, M. Grooten, D. Juffe Bignoli, & T. Petersen (Eds.), *Living planet report 2022 – Building a nature-positive society*. WWF.

Young, M. (2014). What is a curriculum and what can it do? *The Curriculum Journal*, *25*(1), 7–13.

How to cite this article: Thompson, M., Maisuria, A., McCartney, S., & Hamilton, R. (2025). Exploring university student perspectives of a challenge-based curriculum. *The Curriculum Journal*, *00*, 1–16. https://doi.org/10.1002/curj.70013