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"You can't really learn the future" – student perspectives of futures education in schools

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Abstract

Despite numerous attempts over the past 60 years, futures studies have so far failed to become a mainstream part of school education. In light of recent renewed interest in education futures amongst policymakers and academics, this paper reappraises the opportunities and impediments to establishing school-based futures education in the mid 2020s. Drawing on interviews with 61 Australian secondary school students who had participated in a futures education program, the paper explores student perceptions of establishing school-based futures education on a wider basis. Despite pockets of enthusiasm, most students remain doubtful of futures education fitting into their schooling – perceiving futures studies as too uncertain, unknowable, abstract and/or unsettling to be taken up as a regular part of schooling. The paper considers the forms of futures studies that might be seen as acceptable, and whether the most productive way of engaging young people in futures learning is to look toward non-formal and informal education.

Keywords

Educational futures, futures, futures studies, secondary schools, environmental education

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Introduction

Efforts to establish futures education as part of mainstream schooling have a long history, stretching back to the development of the first US school futures courses in the mid-1960s (Gidley and Hampson 2005). Since then, a persuasive literature has emerged extolling the benefits of incorporating futures studies into school curricula (Bateman, 2006; Hicks 1991; Slaughter 2008). This literature demonstrates how futures education can reframe schools as places of purposeful learning - unsettling students' perceptions of how the world should be and instilling an active orientation towards being able "to imagine, critique and create possible, preferable and probable futures" (Bateman 2006).

In this sense, futures education is usually seen as adding a much-needed political dimension to the school curriculum. The early efforts to establish futures education in the 1960s were borne of Cold War ambitions to establish future international collaboration and worldwide peace. Now, 60 years on, emphasis has shifted to addressing contemporary uncertainties around climate change, technological development, geopolitical shifts and societal fragmentation. As such, futures education is presented as a space within which students can critically engage with 'system and society' – i.e. addressing questions of "creating ethical, just and sustainable futures (moving away from neoliberal capitalism, remaking democratic practices, enforcing human and earth rights, for example)" (Facer and Sprague 2024: 157). Engaging in such discussions is argued to be an essential element of contemporary schooling. Indeed, as Petrucci and Brunori (2024: 170) put it, "a pedagogy that does not consider the dimensions of the future is unthinkable today".

Nevertheless, while there have been numerous attempts over the past 60 years to establish futures studies in countries such as the US, UK, Finland and Australia, the idea has resolutely failed to take hold. Identified reasons for this lack of take-up include the bureaucratic intransigence of school systems, lack of teaching resources and teacher training, and general discomfort of educators around the abstract nature of the subject matter (Bateman 2015; Hicks 1991; Slaughter 2008). All told, whereas the 1990s and 2000s were seen as "the heyday" for innovation and enthusiasm around futures education (Smith 2021), momentum has since waned. As we progress through the 2020s, some veteran proponents of futures education are expressing fears that the time has passed – as Richard Slaughter puts it, "the window of being able to envisage a more sustainable and just future appears to be rapidly closing and along with it, the collective imagination to bring forth a better world" (in Smith 2021: 4).

Yet, despite the reluctance of schools to embrace futures, the coming together of education and futures has had something of a recent resurgence in policy, industry and academic circles. The past 5 years or so has seen rising interest in 'future school' and 'school futures' initiatives – led by international organizations such as UNESCO and OECD, and picked up by education academics and those looking working in the education reform and education innovation industries. For example, UNESCO's 'Futures of Education' program has generated a wave of enthusiasm for policymaking, professional reform and research around reorienting schools around an ambitious range of futures concerns. Such programs have drawn on an increasingly sophisticated range of futures and futuring approaches, including the idea of 'futures literacy' (Pouru-Mikkola and

Wilenius 2021) and 'futures thinking literacy' (Viderjor, 2023), alongside calls to develop a 'futures consciousness' amongst young people, and reorient schools as a place where students can develop a capacity to 'use the future' (Miller 2018) – i.e. being able to comprehend the complexity and relational nature of possible future worlds in ways that enhance their engagement and sense of agency in the present.

In this spirit, it seems timely to revisit the possibility of futures education in schools, in particular gauging the views of students themselves. Are schools in the mid 2020s more or less conducive for supporting students to engage in such forms of futures thinking? With this in mind, this paper explores to following research questions:

- How do current students react to the offer of school-based futures education?
- What challenges are raised by the prospect of school-based futures education?
- What could a school-based futures education feasibly look like?

Research methods

In order to explore these questions, this paper reports on research that was conducted as part of a futures education program that was developed by a team of futures researchers and educators (including the authors) and run in two Australian secondary schools over 2023 and 2024. '*Beyond Futures*' was an elective general education course designed to introduce students (aged between 12 and 14 years) to a range of approaches from the futures literacies and critical futures education traditions - including foresight strategies, scenario-building, and anticipatory thinking. The underpinning aim of this program was in line with the 'futures literacy' aims of "developing the individual's capacity to use, imagine and act for futures" (Pouru-Mikkola & Wilenius 2021: 3).

The program focused on three interlinked futures topics: (i) energy futures; (ii) environmental and climate futures, and (ii) AI and other emerging technologies. These were framed through the over-arching lens of school futures – encouraging students to engage with these topics within the context of anticipating future schools and schooling. This combination of topics was deliberate – climate and AI both being topics of popular prominence of the time, and also picking up on emerging policy concerns around schools' digital and energy infrastructures (McKenzie and Gulson 2023).

The program was co-designed by an interdisciplinary team of academics working across the areas of emerging technologies, energy futures, computer science, and sociology of education, in collaboration with professional educators from a state-funded centre specializing in developing multi-day programs for schools on topics relating to science and technology, arts and creative thinking skills, enterprise and design thinking. Over the course of 3 months this team developed a 3-day futures program designed to engage school students in the following activities and stimuli:

- *Thematic discussions:* on emerging issues and approaches relating to future schools, emerging technologies, AI, energy and climate futures, as well as futures literacies approaches such the 'futures cone', '3 Ps' of possible, probable and preferable futures, and ways of 'using the future'. These preparation activities

aimed to ground students in futuring perspectives and stimulate their interest and imagination on key topics.

- *Active investigations:* into past, present and future forms of technology use and energy consumption in schools. One activity involved student taking on the role of 'energy archaeologists' to uncover the environmental footprint of their school's technology, employing digital environmental monitoring sensors. Other challenges involved using satellite mapping tools to explore the green spaces and use of solar power in other schools in the locality, and use of AI tools to simulate future climate conditions.
- *Scenario-building workshops*: supporting students to work together to develop contrasting scenarios of schools in the year 2050 based around: (i) the impacts of climate change; (ii) use of emerging technologies in everyday life; (iii) integration of AI into schools, and (iv) transitions to sustainable energy. Students were encouraged to develop different iterations and consider different outlooks (utopian, dystopian), likelihoods (possible, plausible, or probable), motivations and outcomes. These activities were supported by flashcards that highlighted uncertainties and tensions to stimulate in-depth group discussions.
- *Creative representations*: students were supported to create media to represent their future scenarios - from music and image-making, websites, posters, and storytelling
- *Group presentations*: students presented their 'school of the future' scenarios to their peers and the project team, starting with a 'day-in-the-life' depiction of being a student in a future school. Subsequent discussions were facilitated to support group reflection on arising issues.

The program was run in two government secondary schools in the Melbourne metropolitan area (School A: a large co-educational school; School B: a smaller girls' school). As part of the evaluation of these 'Beyond Futures' activities, researchers acted as participant observers across all the program activities, recording conversations with students, and conducting end-of-program group interviews with all students (47 female, 14 male) and educators involved in the program delivery. This paper reports primarily on these interview data and focuses on the main research questions outlined previously – i.e. students' views and feelings about engaging with futures education in their school.

Analysis of these interview data was rooted both in the a priori concerns outlined in the previous section, and *a posteriori* issues arising organically from the interview and observation data. In this sense, analysis took what Fereday and Muir-Cochrane (2006) describe as a 'hybrid' process of inductive and deductive thematic analysis that allows us to fully describe the phenomenon being investigated. This involved a few steps. First, was the deductive generation of salient preliminary codes based on the three areas of research questioning outlined above. We then engaged in repeated re-readings of the interview corpus, leading to the inductive generation of data-driven themes – i.e. issues arising from the interview data that we felt encapsulated students' experiences, perceptions and attitudes toward the introduction of futures education into their schools. These themes are now discussed in turn.

Research findings

Students' reactions to school-based futures education

On one hand, our interviewees engaged well with our 'Beyond Futures' program – engaging in discussions and work that picked up on key futures literacies distinctions such as short-term/ long-term futures, and personal/ collective futures (Miller 2018). Students grasped and made use of various other futures ideas, and the program received high-ranking 'end of course' evaluations from the students in both schools.

On the other hand, once the program had finished, students' reactions to the prospect of subsequent futures components in their schooling were mixed. In a positive sense, a few students remained enthused by what they saw as subject matter that was imaginative, creative and open-ended. As one student put it, "it's fun to experiment with stuff that obviously at the moment isn't real … stuff that you don't know if it'll be possible in the future or not" [Female, School B, Group Interview#1]. Others welcomed opportunities to engage with future-related issues in a considered and constructive manner – especially in comparison to depictions of the future that students were exposed to through popular media. As one boy from School A reflected: "a lot of videos on YouTube are showing the future as a negative thing. Things like 'global warming has ruined the planet'. But I think this [futures program] has helped me see it in a positive way" [M, A, #2].

For some, the introduction to various aspects of futures literacy had allowed for more focused engagement with futures issues. As one girl from School A reflected on her use of the futures cone:

> "I found it fascinating because I've never seen something like that because we don't study Futures or anything like that. … Often when someone says 'future' we don't know anything about it, right? It's just a word that we came up with. But the way that was laid out with the cones and everything made it seem so clear. So, if I'm here [on the futures cone], then this is good. But if I'm here [on the futures cone] it won't be possible. It made it really clear and good to understand" [F, A, #3]

Most students, however, were less enthusiastic. Generally, it was considered that futures studies in school would remain a niche topic appealing only to a particular sort of "student and their mindset" [F, B, #1]. This was described in various ways – for example, "more of a creative sort of person … [whereas] if you're more towards the *math* side of things, you might not choose it" [F, A, #3]. This notion of 'creativity' was elaborated on in other interviews as "passionate kids" who "would like [futures studies at school] because they would reckon 'I could do this to make a shape a better future'" [F, B, #4].

Epistomological challanges of school-based futures education

One of the main reasons that futures education was described mostly in these ambivalent terms was the unknowness of the topic - "you don't know what's gonna happen in the future". [F, A, #3]. A few students raised this as a positive aspect – welcoming the

opportunity to "dig deep" [M, A, #5] and "a nice bit of fresh air when I just get to discuss freely" [M, A, #5]. In this sense, our program was widely felt to have been an unfamiliar experience that did not conform to the familiar school mode of "usually just learn[ing] things to then regurgitate" [M, A, #5].

In comparison, other students saw futures studies to be unsuitable as a school subject due to there being "no evidence", "no documentation", and being "mainly based on assumptions … educated guesses" [F, A, #6]. This was seen by most students as incompatible with an established curriculum that was 'more solid' and "based on solid facts that don't change" [F, A, #3]. Here, many students were keen to compare their experiences on our futures program with their history lessons – "[history] is easy to learn, because it's already there. And it's not going to change" [F, B, #7]. In comparison to curriculum areas such as history, "you can't really learn the future" [F, B, #8].

This is not to say that students felt unable to speculate, hypothesize or imagine – rather that these ways of thinking were peripheral to what they understood as schools' core business of 'learning'. The difficulty of engaging with ambiguous and unresolvable subject matter was echoed by the program teacher, who acknowledged the difficulty of "trying to teach them about something that *you* don't know about" [Teacher]. For some students, then, engaging with futures issues was perceived as an intellectual distraction:

> "[Futures] is very vague. You can't say 'This *is* going to happen in the future'. … so, students might like studying the past more because they know that 'Okay, this *is* set in stone'. I don't want to get my head wrapped around things that might *not* happen - I don't want to get so invested in these things" [F, B, #4]

Such tensions were also recognized by the main program teacher – who reflected that her role in our program had been one of 'not teaching [but] facilitating'. While accustomed to delivering extra-curricular programs that were exploratory and open-ended in nature, this educator recognized students' discomfort and 'distrust' with the material and approaches featured in our program:

> "Oh, they love being told stuff. ... we find often with the students that we work with that they're so used to being told stuff that when they get to [our lessons] they're like, 'But what do I do?'. And we say, 'Oh, but there's no wrong answer, just have a go'. And they're like, 'Yeah, but what's the answer?'. They have the idea that we're secretly holding onto the right answer". [Teacher]

Affective challanges of school-based futures education

Another area of concern raised by teaching staff was the risk of 'freaking out' students with topics and issues that were not "palatable for 13- or 14-year-olds … you have to tread carefully" [Teacher]. Concerns over the potentially sensitive nature of futures thinking resonated across our interviews and was seen as particularly pertinent for this generation of young people who had experienced prolonged bouts of lockdowns and remote schooling during the COVID-19 pandemic. As the program teacher noted succinctly, "I

think they're tired" [Teacher]. More specifically, she suggested that this cohort of students might be particularly skeptical of the prospect of societal change. For example, our program's focus on school futures was seen to ring a little hollow given the rush to return to conventional face-to-face schooling in 2022 after the pandemic:

> "Like [COVID] was the one opportunity we had to change [schools]. And we didn't…. Like if school was going to change surely it would have changed in that instance? It was the prime opportunity for us to change something. But all that happened was that we got pushed back exactly the same" [Teacher]

During the interviews, students also conveyed a sense of being unsettled and concerned with various issues that our futures program had touched on – notably issues around climate and environmental change. These were topics that were perceived by some students as usually being addressed at school in overtly bleak terms: "Last year, we had like a whole thing about natural disasters … bush fires and floods … it makes you think that like woah, we're really in a really dark big hole" [F, B, #8].

Generally, this framing of environmental futures as a "very worrying" [F, A, #6] topic was traced back to schools' clumsy approaches to covering such issues in lessons. For example, another group recalled being previously shown television programs produced during the early 2000s which, when viewed 20 years later, came across as making some rather imminent predictions:

> "We were watching David Attenborough about climate change. And it said, if we continue at this rate by, like, 2035, the slow decline of the human race would happen because of too much air pollution. And then everybody started freaking out and screaming … my class didn't react well to that" [F, B, #8]

As such, our interviews found a sizable proportion of students being rather disengaged from efforts in school to address climate and environmental futures – as various students told us: "I wouldn't say we're *that* fussed about it" [Neil Brett - 2]; "this generation are not really into it" [F, A, #3]. Instead, issues around climate change, environment and sustainability were described as resonating only with those students who were seen as being "really passionate about these things … there's a lot of different people in our generation, and we all have different passions and different interests" [F, A, #3]. It was suggested that climate change was an issue that older generations needed to take responsibility for. As the program teacher reflected:

> "This is a distinctly different cohort - Greta Thunberg is now 19 but these are 13- and 14-year-olds. For the older kids [climate] was their thing. Now I get the impression they are like, 'Well, it's either been fixed, or *you're* fixing it' … or its somebody else's problem. Maybe it is a bit of a mini generational shift?" [Teacher]

At best, then, most students could envisage futures education as being useful if it instilled resilience and prepared them how to navigate upcoming risks, hardships and

dangers: "It could help students for the future, because I can, you know, inform them of what kind of dangers there are, and then how can they survive those kinds of dangers?" [M, A, #2].

Envisaging a school-based futures education

Following on from this latter point, some students did consider that school based 'futures' education might be more welcome if focused on tangible actions and practical behaviors that students could begin to enact. As one student put it, "The main focus should, like, focus on the present" [F, B, #1]. This idea of being taught practical skills and focusing on actionable outcomes was seen to contrast with the tendency for discussions at secondary school level to usually involve classroom-based discussions and speculative conversations:

> "There's a lot of armchair activism, and people just like, "We have to do this … it's very important that we pick up on this". And then they just sit there, and we have four-hour conversations about how you should pick up litter. But in that four hours you could have picked up hundreds of kilograms of litter and done a lot more for the environment than just sitting there and having a conversation. And that's just the problem. And we're doing it right now. We're having a conversation about how this environment needs to change. But we're not changing it. We could be out there picking up rubbish right now" [F, B, #4]

For these 13- and 14-year-olds, at least, such sentiments reflected a feeling that they were lacking agency to enact systemic change. For example, in terms of the discussions around food futures that had arisen during one group's co-design of future school scenarios, students ultimately considered change to be the responsibility of governments and corporations: "[changing food] doesn't entirely depend on the students. It depends on like massive companies" [F, B, #1]. As such, students felt their time was best spent engaged in tangible local actions – as had been the case when they had environment-related lessons in primary school – **"**at my primary school at least we had a garden, …we had a worm farm" [F, B, #4].

Some students argued that embedding futures education into their current schooling would require making clearer connections with core aspects of the curriculum, such as STEM subjects or being given information about employment opportunities and **"**preparing for jobs and what students could want in a future career" [F, B, #1]:

> **"**I think it is really important that we do learn about the future … you kind of get the idea of what's going to be big in the future. So, you can choose what career path you might go into" [F, A, #3]

In contrast, continuing with many of the components featured in our futures program (anticipatory approaches, scenario building, the 3 Ps) were seen as "a bit weird as a subject" [M, A, #5], and modes of learning that were essential elements of what students felt the school curriculum should consist of:

> "I'd say it wouldn't be the worst thing if you didn't have [futures] as a part of the curriculum. Like, I *do* think it's important. But if something happened and you had to get rid of a few subjects, then it wouldn't be the worst thing to get rid of" [F, B, #1]

While most students were left ambivalent, there was a sense that a few had been provoked by our program to question their experiences of school as a place to "just learn things to then regurgitate" [M, A, #5]:

> "I feel like that's the sort of wrong thing here [in school]. Like, teachers are like, 'Okay, this is the right answer'. There's always going to have to be a right answer. No, I feel like we should change that perspective of ours. Like, someone's gonna think like this, and someone else is gonna think like that. Why does there have to be a *right* answer? Yeah" [F, A, #3].

In this sense, some students remained positive about the value of futures thinking in engaging them with open-ended discussions about their future: "I feel like, as a society, we all sort of contribute to how we want our future to be" [F, A, #3]. Nevertheless, significant doubts remained that schools were a conducive (or even appropriate) context to be doing this. Schools were described as not encouraging open-thinking – instead enforcing a 'strict' mindset based around 'studying':

> "I don't think so at all, because in school they try to make you think that this is the best thing to do. Best place for you to do when you're in the time that's given. And then when you are home, you try to think more openly. You know, you're outside. I think totally different when I am at school and when I am at home" [M, A, #5]

> "Well, school puts you in this mindset that you need to keep studying. But at home is like more carefree, you know, around your family. Most of the time you can do whatever you want. There's no like strict rules like at school. It is like two different mindsets" [M, A, #5]

Discussion

While this was a highly resourced program based on contemporary futures approaches, there are obvious ways in which it could have been improved. Certainly, these interviews suggest that students would have welcomed more motivational and active dimensions, such as explicit efforts to make connections with tangible actions in the present. However, as it stood, this program provided a good bellwether for these students' dispositions toward the idea of schools-based futures. In this sense, it is disappointing to find only modest levels of general enthusiasm for further futures studies in school.

All told, while these students had engaged successfully with the idea of personal and collective futures during our program, the interviews conveyed a sense of individualism and fatalism when anticipating how school-based futures education might be more deeply integrated into school curricula. For example, in terms of Rogers and Tough's (1996) five stages of development which students ideally progress through when learning about possible futures, our interviews suggest that students felt that schools are set up only to

support the initial 'cognitive' stage of new knowledge acquisition and being introduced to new ways of thinking. In contrast, schools were not described as conducive places to support students' development of emotional responses to this new knowledge, let alone subsequent stages involving existential questioning of values and lifestyles, developing a sense of personal empowerment or engaging in social action.

Disappointingly, while our interviews confirmed the established finding that teachers are wary to encourage unconventional thinking and speculation (Bateman 2015), we also found a sense of epistemological conservativeness in many students. While our interviewees were aware of the types of 'disorientating' and unsettling thinking that futures education is trying to stimulate (Pouru-Mikkola and Wilenius 2021), they seemed clear that they did not have time to waste on being disorientated in this way while at school. These (arguably most important) aspects of futures education were not seen as a welcome addition to the implicitly accepted purpose of school – i.e. 'learning' tangible things that would later form the basis of how students were assessed.

At this point, it might be tempting to read these findings as indicative of deficits in student understanding and imagination. For example, it might be argued that these students were lacking maturity to be engaged in futures thinking – lacking the willingness and/or capacity to indulge in speculation and imaginative activities. It might also be argued that these students felt uncomfortable by the challenging nature of the subject – i.e. the fact that "people generally aren't very good at futures thinking" (Pouru-Mikkola and Wilenius 2021: 1). Alternately, it might also be argued that students' conservativism around not wanting to stray far beyond the perceived familiar nature and form of school 'learning', arises from a post-COVID desire to retain reassuring confines of school stability, thereby echoing wider adult desires for a 'return to normal' (Brooks and Perryman, 2023).

Yet a more nuanced reading is to see students as possessing expertise around the nature of contemporary schooling (what might be termed 'school savvy'), and clearly having first-hand knowledge and realism around the nature of their own lives, desires and capabilities. In practical terms, for example, students were aware of the limited room for additional subjects to the "crowded curriculum" (Crump 2005). The students' interviews reflected a pragmatic acceptance that they needed to 'do' school and navigate the contours/confines of school, while also recognizing that they have space to think and act differently outside of school. These students seemed certain that only a ("passionate") minority of their peers would be engaged by engaging with topics such as climate change and environmental awareness. For better or for worse, it could be argued that this is a generation of young people that has been conditioned to see education as individualist and instrumentalist. As Will Davies (2024, n.p) puts it:

> "To be young today is to face the future – the planet's as well as one's own – at a time when social safety nets and familiar institutional pathways are being eroded. Education has been recast as an individual investment, whose consequences for good and ill extend for decades".

In this sense, the views of these students from the mid-2020s on the barriers facing futures education reflect those identified by researchers in the 2000s. These range from the

'ontologies of indeterminacy' (Sobe 2024) implicit in futures thinking through to the inertia of school structures and logics. As such, any sustained efforts to install futures studies into our study schools would likely have to take the suggestions of these students to heart. For example, it might be suggested that any futures education in these students' schools would likely have to have a clear correspondence to careers, more alignment with a 'STEM' sensibility and/or a repackaging of content in a form that better resembled a sense of discrete 'answerable' knowledge and "opportunities for action" (Ramos 2005: 29).

At the same time, futures education might seek to make connections with approaches based on Deweyian notions of deliberation, which are aligned with futures studies notions of imaginative narrative and already established in some parts of schooling (Semetsky, 2010). Links might also be made with ongoing efforts from critical pedagogy to develop suitably robust approaches to engage students with matters of uncertainly, crisis and hope (see Macrine 2020). All this lends credence to recent calls for futures education to be based around experiential (rather than abstract) learning (Amsler and Facer 2017), active- and sensory-based pedagogical approaches, and a focus on exploring nearby places (Häggström and Schmidt 2021). This also suggests that schools-based futures education should engage more explicitly with the state of 'not-knowing' and making what Sobe (2024) identifies as 'usefully unknowable' issues as a key topic/competency that students are aware need to be developed.

Of course, another suggestion arising from these students' responses is that rather than altering futures education to 'fit' with schools, we instead look to non-school settings which might be more conducive to the types of sense-making and understandings that underpin futures studies. This fits with a burgeoning strand of critical education commentary that pushes for giving up on the model of 'neoliberal' schooling that has grown up over the past 40 years to fundamentally re-shape the character of schools in countries such as Australia and other Anglosphere countries. Perhaps it simply makes no sense to continue trying to fit a subject such as futures into schools. Perhaps we should be looking toward informal and non-formal learning spaces. This certainly chimes with Ball and Collet-Sabe's (2022) call to look beyond schools when looking to support forms of education that are explicitly ethical and concerned with the politics of self – these authors' argument being that the modern neoliberal school is an 'intolerable institution' to such requirements.

Conclusions

Looking back over the past 60 years or so, the non-appearance of futures education in schools is as frustrating as it is perplexing. The prospect of futures education has declined from the early 2000s' enthusiasms that "futurists now might want to help create entire high schools with futuristics at their very core" (Shostak 2004: 23) to a current lack of momentum and hope for meaningfully integrating futures education into any part of the school curriculum. Our small study suggests that the prospect of establishing futures education into these Australian schools remains as far away as ever. Most worryingly, students themselves seemed largely unable to respond with sustained belief in the idea.

This paper has highlighted some ways forward if efforts are to continue in developing futures education for schools. These include the need to pay particular attention to supporting students' capacities to engage productively with unknowness and uncertainty, ensuring that futures content relates to building students' sense of autonomy, and not assuming young people to be especially engaged with issues such as climate change, environmental or technological futures. That said, the paper also gives strong grounds for recommending that efforts to promote futures as a school subject are reconsidered. Perhaps futures thinking is something that is best promoted as a cross-cutting sensibility throughout schools, with efforts make to establish 'futures-as-pedagogy' throughout all areas of schooling (Facer and Sprague 2024). It might even be concluded that futures education efforts move away from schools altogether. Perhaps the most productive way of engaging young people in futures learning is to look toward non-formal and informal education – from libraries and youth clubs through to home-based learning. It might well be that these spaces are more conducive to the kinds of learning and benefits that future education entails.

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The Human Ethics Review Committee at Monash University approved our interviews (approval: 40734) on November 2023.

Informed consent

Parents and respondents gave written consent for review and signature before starting interviews.

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