RSA

PUPIL DESIGN AWARDS 2022-23

Final evaluation report

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November 2023

Acknowledgements

Contents

We are the RSA. The royal society for arts, manufactures and commerce. Where world-leading ideas are turned into world-changing actions. We're committed to a world that is resilient, rebalanced and regenerative, where everyone can fulfil their potential.

The RSA has been at the forefront of significant social impact for over 260 years. Our proven change process, rigorous research, innovative ideas platforms and unique global network of changemakers, work collectively to enable people, places and the planet to flourish.

We invite you to be part of this change. Join our community. Together, we'll unite people and ideas in collective action to create opportunities to regenerate our world.

We define our ambitions as:

Our mission

Enabling people, places and the planet to flourish.

Our vision

A world that is resilient, rebalanced and regenerative, where everyone can fulfil their potential.

How we deliver our work

We unite people and ideas in collective action to create opportunities to regenerate our world.

We are

A unique global network of changemakers enabling people, places and the planet to flourish.

About our partner

The Comino Foundation was established in 1971 during Dimitri Comino's celebrated role as an RSA Fellow. In this long-standing shared history, the Foundation and the RSA have collaborated on a number of ventures designed to develop young people's individual and collective capabilities so that they are better equipped to live fulfilling and purposeful lives for the benefit of themselves and wider society.

Executive summary

What this evaluation is seeking to understand?

The RSA Pupil Design Awards is a free, national, challenge-based project for secondary schools, established in 2014 by the RSA and the Comino Foundation. This evaluation was undertaken to understand:

1. How the delivery of the Pupil Design Awards is contributing to the following outcomes for pupils and teachers:

— Pupils' creative self-efficacy.

— Pupils' awareness of real-world issues facing them and their communities.

— Pupils' design capability (as an outcome) and teachers' design capability (as a mechanism of change).

2. What factors are critical to support teachers to complete the project.

3. How to make the awards more inclusive of schools that have high proportions of pupils from more disadvantaged backgrounds.

To test our theory of change (unchanged since last year; see Figure 2 on page 7), we implemented an evaluation framework broadly similar to the evaluation of the 2021-22 awards (see Methodology section for more details). We did refine our approach to evaluation and delivery of the Pupil Design Awards using insights and recommendations from the 2021-22 evaluation. An additional evaluation question around inclusivity was included as we move towards an expanded Design for Life Awards, a key pillar of the RSA's new strategy. Excitingly, the Pupil Design Awards forms a core part of the new Design for Life mission, unlocking confidence, capabilities, and connections for young people to contribute to a more resilient, rebalanced, and regenerative world.

Topline findings and recommendations

Topline findings are shared below. Greater detail is provided in the final section of the report.

- Teachers sign up to deliver the Pupil Design Awards for a range of reasons including: to expose pupils to careers in design, to engage them in real-world design contexts, to nurture capabilities such as creativity, empathy, problem solving, and collaboration, and to prepare them for GCSE and A-level non-exam assessments in design subjects.

- There was limited evidence to suggest that the Awards are fostering creative self-efficacy specifically, but feedback from pupils and teachers suggests the Awards foster creativity and confidence through engaging with the design-thinking process and researching brief topics.

- As a result of engaging in the Pupil Design Awards, pupils reported an improved understanding of designing for others unlike themselves and the wider, social impact of design, with teachers also valuing this element.

- Pupils valued the Awards for providing opportunities to cultivate other capabilities such as research skills, understanding how to tackle a problem, teamwork and collaboration, and presentation and communication skills.

- For teachers, tackling the briefs using the five-stage, non-linear, iterative process as outlined in the resource pack was highlighted as important for pupils to confidently arrive at design ideas. However, pupils may see the design thinking process as set out in the resources as more of a helpful guide for structuring their work, rather than following it in a non-linear way.

- Pupils and teachers reported barriers to engaging more meaningfully with members of their local communities in order to improve their understanding of real-world issues, but found the briefs as a highly relevant and an important way to engage young people with current, real-world issues. It is difficult to ascertain whether it is awards, teachers' own motivations, assessment requirements, or a combination of all three, that leads to pupils gaining an improved understanding of real-world issues.

- The main factor that emerged in enabling teachers to deliver the Awards faithfully was the ability to integrate it with curriculum and assessment materials, primarily as practice for GCSE and A-level non-exam assessments in design and technology. Other enabling factors include previous experience of delivering the Awards, and the quality and quantity of support that the RSA provides to teachers.

- Challenges included the amount of time required to support some pupils with complex ideas in the briefs, timetabling clashes with revision for exams, and the combination of days lost to teacher strikes and a higher-than-usual number of bank holidays at the beginning of the 2023 summer term.

- Newer schools struggled to complete the Awards, with some feeling like there was a lot of material to take in, particularly for pupils who have fewer material and cultural resources to draw upon, or where there is less of an expectation they will work on their proposals outside of the classroom or benefit from parental support.

Recommendations

- Communications to schools should emphasise how the Awards can be used to prepare pupils for GCSE and A-level non-exam assessments, linking specifically to the criteria of the AQA and OCR examination boards, while also providing suggestions for how the Awards could be delivered through non-design subjects, or adapted for industry-focused requirements of BTECs/T-levels/apprenticeship courses.

- Bespoke teacher sessions should be designed for first-time registrants, with regular follow-ups to ensure they stay engaged through to completion and return year-on-year. The RSA should invite teachers who have delivered the Awards to share guidance and examples of how to deliver the Awards for the first time.

- The RSA should explore an expanded role for Fellows/mentors in supporting pupils to break down complex issues in the briefs. These could take the form of dedicated sessions based around the brief topics in autumn/winter including creative activities to unpack the concepts in the briefs.

- The RSA should explore an expanded role for Fellows/mentors to deliver a series of online/in-person workshops with groups of schools to plug the gap left by lack of specialist design teachers.

- The RSA should facilitate connections between schools and local Fellows to arrange for pupils to gain feedback on their ideas, to overcome pupil reservations around engaging with local communities, and provide clearer guidelines for teachers around how pupils could approach wider community members for feedback and testing.

- Prioritise hybrid/digital delivery to widen participation and ensure more schools are able to benefit from mentor expertise.

Introduction

About the Pupil Design Awards

The RSA Pupil Design Awards is a free, national design award programme for secondary school and sixth-form pupils aged 11-17. Participants are encouraged to use their creativity and imagination to tackle real challenges to enable people, places, and the planet to flourish.

Working towards this vision, the Awards aim to empower pupils to use design thinking skills to tackle real challenges present in their schools, their communities and across the planet. We do this by:

- Broadening teachers' and pupils' understanding of how design for social innovation, as a methodology and a process, can be applied and understood through challenging briefs and engaging resources.
- Introducing design thinking to teachers and pupils through interactive workshops delivered in collaboration with design education experts.
- Connecting schools to their local communities and enabling pupils to design solutions to local and global contemporary challenges.
- Convening networks of educators, designers, innovators, changemakers and thought leaders, and supporting teachers and school leaders to understand how design thinking principles can enhance their curriculum beyond the PDAs.

Figure 1: The design-thinking process
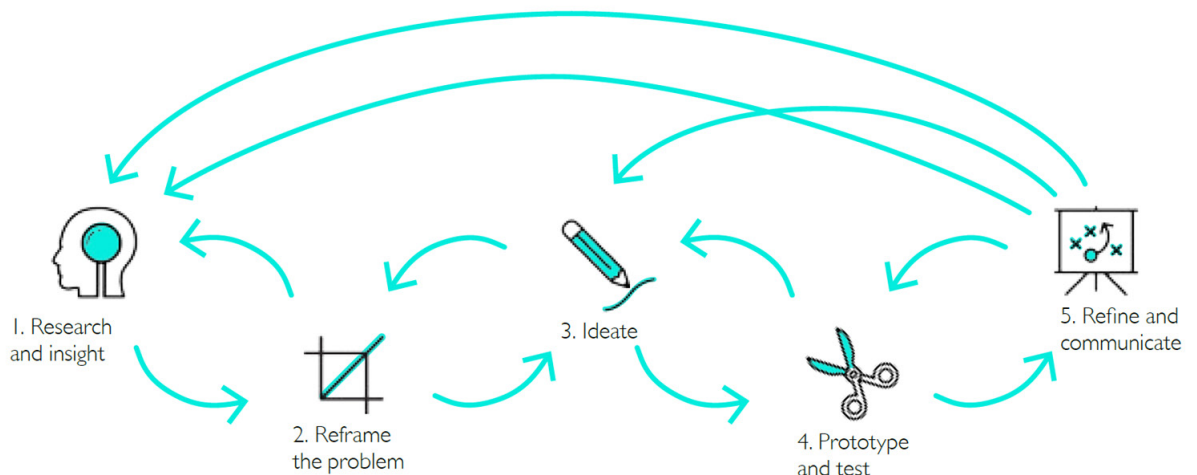
The Awards are categorised into three age groups: years 7 and 8, years 9 and 10, and year 12. They provide an annual structure complementing the academic calendar, with a flexible, suggested seven-week scheme of work for teachers.

Briefs are designed to inspire participants to tackle pressing social issues with creativity and confidence. This year, pupils were tackling one of three briefs:

1. All being well. How might we make improved health and wellbeing more accessible to everybody?

2. Powering people. How might we support communities to transition to renewable energy?

3. Planet generation. How might we create stronger communities by bringing older and younger generations together to tackle social and environmental issues?

Pupils are supported through a network of mentors, all former Student Design Awards winners, who provide guidance and support to young people - enhancing their responses to the briefs, as well as sharing insights from their emerging careers in design, and from working on their own design projects.

Teachers are supported through teacher training sessions, resources, a suggested seven-week scheme of work, and mentor visits. The annual PDAs cycle closes with a final celebration that brings together professional designers and educators to engage with pupils' work, deliver inspiring talks, and celebrate the world of design with students.

Changes made to 2022-23 delivery

As a result of last year's evaluation recommendations, the RSA implemented a number of changes to the Awards' delivery model:

- **Improved touchpoints with teachers:** this included direct one-to-one outreach with educators through termly email updates containing resources and guidance, and regular phone call check-ins to support them throughout the year.
- **Increasing shared impact of PDAs and SDAs:** for the first time, we ran joint briefs with the Student Design Awards, adapting the content for a younger audience, and opened Student Design Awards regenerative design workshops to Pupil Design Awards participants. We also held our second joint celebration and workshop day, bringing together school pupils and university students to learn about regenerative design and nature-based practice.
- **Improving resources and workshops:** based on feedback from teachers about how to communicate the benefits of the non-linear design thinking process, we updated our mentor and teacher sessions, and also provided a much wider range of tools and resources on a live Miro board, updated throughout the year, to aid experimentation and ideation.
- **Reducing the competitive element of the Awards:** this year we moved from selecting 'winners' to acknowledging the growth and learning of all participants, as well as highlighting projects and teams that deserved commendation. As part of this, we provided detailed staff and judges' feedback for every submission.

Feedback from teachers this year suggests these have been positive developments that support teachers to complete the project, particularly around the nature and content of the briefs, the quality and quantity of support the RSA provides, and how easily contactable and supportive staff members are with teachers' queries.

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Methodology

Evaluation questions

Our evaluation was guided by the following evaluation questions:

1. Does participating in the Pupil Design Awards lead to improved creative self-efficacy for participants? If so, for whom and under what circumstances?

2. Does participating in the Pupil Design Awards improve the design capabilities of participants? If so, for whom and under what circumstances?

3. Does participating in the Pupil Design Awards lead to pupils' improved awareness of real-world issues facing them and their communities? If so, for whom and under what circumstances?

4. What factors are critical in supporting teachers to complete the Pupil Design Awards?

5. How can the Pupil Design Awards be more inclusive of schools from more disadvantaged backgrounds?

Figure 2: Theory of change

AIM	CONTEXTUAL FACTORS	ACTIVITIES	MECHANISMS OF CHANGE	OUTPUTS	OUTCOMES
All young people develop creative self-efficacy through engaging with real-world problems and leave school with knowledge and skills which enable them to flourish in their personal lives and contribute to the flourishing of their communities.	Pupils and schools have adequate access to the internet and materials.	Recruit schools targeting those with higher proportion of FSM eligible pupils.	Pupils and teachers engage with all phases of the design thinking process as suggested in resources.	Cohort of registered schools.	Improved design capability among pupils.
	Teachers have a particular interest in one of the briefs or social design more generally.	Write three briefs on contemporary social issues with supporting information and further resources Briefs are co-created with pupils, teachers, mentors and other partners.	Teachers read the resources, attend the training and book a mentor visit.	Pupil brief pack and teacher resource pack.	Increased creative self-efficacy among pupils.
	School/SLT promotes curriculum that is inclusive, prosocial, encourages creativity and engagement with local community.	Produce resources and suggested scheme of work for pupils and teachers to support with delivering design thinking activities in the classroom.	Pupils experience high quality engagement with design for social change through mentor scheme and judging process.	Three briefs and further resources.	Pupils' greater awareness of real-world issues facing them and their communities.
		Hold teacher training sessions to introduce design thinking activities to teachers and prepare them for classroom delivery.	Pupils experience rich and meaningful engagement with their communities and the issues facing them through the briefs.	Teacher training session recordings.	
		Recruit mentors from SDA alumni – early career professional designers. Mentors provide bespoke feedback on pupils' work before submission.	Teachers use design thinking to support pupils to develop associated skills and capabilities such as collaboration, research, ideation, critical thinking, communication.	Mentor session reports.	
		Curate judging panel from across design, education, academia and third sector diverse in professional and personal experience.	Design thinking is introduced as a mechanism for social change across school curriculum.	Pupils' final proposals.	
		Hold two stage judging panel: shortlisting and pupil presentations.	Support for and communication with teachers and mentors is maintained throughout the year.		
		Provide communication and support for teachers throughout.			

Evaluation framework

Our evaluation framework followed a similar structure to last year's evaluation.

Figure 3: Evaluation framework

Method	Purpose
Teacher baseline survey	To understand teachers' perceptions of pupils' **creative self-efficacy** and **awareness of brief** topics.
Teacher endpoint survey	To provide more information from teachers about how **faithfully they implemented the project**.
Teacher workshop survey	To understand teachers' motivations and plans for delivering the Awards.
Term 2 phone calls with all registered schools Term 3 phone calls with all registered schools	To understand if teachers are intending to continue delivering the PDAs, what support they need to do so, and reasons for why they may have stopped delivering.
Mentor observation reports	To understand **how teachers are delivering the project in the classroom**, and to what extent they are using the materials and resources as outlined in the teacher resource pack. To understand **how teachers are implementing the Pupil Design Awards** – either as part of the design curriculum or as an extra-curricular activity.
Teacher interviews with non-submitting state schools	To provide greater understanding of the drivers and barriers involved in **faithfully implementing the project and what factors are critical to support teachers to do so**. To understand how pupils' participation in the Pupil Design Awards has led to improvements in: — Design capability. — Awareness of real-world issues. — Creative self-efficacy. And why this has or has not been the case.
Pupil focus groups	To understand how the delivery of the Pupil Design Awards is contributing to the following outcomes for pupils and teachers: — Pupils' creative self-efficacy. — Pupils' meaningful engagement with the local community. — Pupils' design capability (as outcome). To explore pupils' experiences and perception of progress.

Data collection methods

Baseline/endpoint survey

Upon registration and submission, teachers were asked to respond to a questionnaire designed to understand how they felt their pupils demonstrate capabilities and topic awareness related to the outcomes of the Pupil Design Awards. Questions asked about pupils' awareness of brief topics – renewable energy, intergenerational collaboration, and health and wellbeing – and about pupils' ability to demonstrate capabilities around creative self-efficacy and the outcomes of the Awards. Teachers were given a five-point Likert scale from 'none' to 'all' to respond to, with 32 teachers responding at baseline and 10 responding at endpoint. Six teachers (10 percent of participants) completed both baseline and endpoint, meaning it is difficult to accurately ascertain change over time.

Mentor reports

We asked mentors to fill out post-workshop forms, asking questions to understand general information about the session, a 200-300 word reflection, enabling factors and barriers, and what challenges mentors think remain for the pupils after the workshop. Insights from these reports feature throughout the 'findings' section of this report.

Teacher interviews

We conducted eight interviews with both submitting teachers (n=5) and non-submitting (n=3). Interviews lasted around 45 minutes to an hour, all conducted via video call. Interviews with non-submitting teachers were designed to understand the reasons why teachers stopped delivering the Awards, and how to make the awards more inclusive and reduce dropout of state schools. Interviews with submitting teachers were designed to provide greater understanding of the drivers and barriers involved in faithfully implementing the project (and what factors are critical to support teachers to do so) and to understand how pupils' participation in the Pupil Design Awards has led to improvements in design capabilities, awareness of real-world issues, and creative self-efficacy.

Pupil focus groups

We conducted four pupil focus groups across three schools, comprising 15 pupils. Discussion guides were designed to understand how the delivery of the Pupil Design Awards is contributing to outcomes related to design capabilities, awareness of real-world issues, and creative self-efficacy, as well as exploring pupils' experiences and perception of progress.

Limitations

The low number of paired responses at baseline and endpoint means that accurately ascertaining change in pupil outcomes over time using the survey is difficult to do. Furthermore, the survey has been amended from the prior year (which was delivered directly to pupils) to one that teachers completed based on their perceptions of pupil capabilities and creative self-efficacy. We changed this survey due to concerns that younger pupils were not reliably answering the questions. This does, however, mean that we are not asking pupils directly about their experience, and are instead asking teachers 'a step removed'. See the final section for recommendations on the future delivery of baseline/endpoint surveys in evaluating the Pupil Design Awards.

Findings

Scale and reach, participation, engagement

- The overall number of registrations this year was 59 schools, an increase of approximately 25 percent on last year.
- Of these, 32 (54 percent) were state schools, 23 (39 percent) were independent, 2 (3 percent) were international schools, and 2 registrations (3 percent) came from individuals who work in partnerships with schools. See Figure 3 for more detail about participation across the stages of implementation.
- The overall number of submitting schools was 13, representing an attrition of 78 percent. Five submitting schools (38.5 percent) were state schools, and eight (62 percent) were independent schools.

Figure 4: School engagement by type

School type	Registered	Teacher workshop	Mentor session	Submitted	Commended
State	32	10	4	5	2
Independent	23	2	2	8	6
International	2	0	0	0	0
Other	2	0	0	0	0

- The overall number of submissions across all schools was 79.
- Submissions by brief:
— All being well: 34

— Powering people: 26

— Planet generation: 10

- In total, 133 pupils submitted work this year (55 male, 78 female).
- By age group, three submissions were from pupils in years 7 and 8, 49 were from pupils in years 9 and 10, and 29 were from pupils in year 12. The average age of participants was 15.
- The average team size was 1.6, continuing a trend of decreasing team sizes seen through previous years.
- Eight schools were commended and invited to our Awards day. Of those, two (25 percent) were state and six (75 percent) were independent schools.

Figure 5: School engagement data

Category	2018-19	2019-20	2020-21	2021-22	2022-23
Registrations	29	50	48	49	58
Completions	18	6	15	13	13
Total number of proposals submitted	68	25	78	95	79
Total number of pupils across proposals	221	54	167	173	133
Total pupils reached	c1000+	c1600	c1600	c1600	c1600

Why do teachers register for the Pupil Design Awards?

We asked all teachers what key outcomes they wanted to achieve for their pupils through participating in the 2022-23 Pupil Design Awards as part of the registration process[1] and also during semi-structured interviews. Answers were broadly split across three areas.

Firstly, teachers registered to prepare pupils for design in the 'real world'. This might mean working to a 'real', 'live', 'external' or 'contextual' design brief, but also understanding the 'social responsibility' of design and engaging with professional designers through the mentor programme. Teachers found the opportunity to "immerse pupils in real-world contexts beyond the classroom or workshop" and provide a "true to life designer experience" highly valuable:

"I quite liked the sort of social design aspect of it. I'm always trying to say to my students, you've got to remember, design is everywhere, it's in everything, whatever we do, it's there". Year 12 submitting teacher

Secondly, and relatedly, teachers registered to cultivate a set of skills and capabilities among their pupils through engagement in the Awards, primarily problem solving, empathy, idea generation, collaboration, and confidence. One teacher, a curriculum lead for creative subjects at a further education college, registered to cultivate creative skills she felt had been squeezed out of the "restrictive" A-level content of non-design subjects such as film and media.

Thirdly, teachers registered to fulfil curricular obligations. Some sought to run the Awards because it provided a concrete opportunity to prepare pupils for GCSE and A-level non-exam assessments (NEAs).[2] For these teachers, many elements of the Awards delivery model align with the AQA and OCR criteria for GCSE and A-level design and technology non-exam assessment, such as the experience of being set an external brief, designing for others, and the iterative design process.[3]

"[The Pupil Design Awards] links really nicely to both the AQA design technology and the [Cambridge Nationals] engineering design [and] the sort of things we'd be expecting to see coursework-wise". Year 12 submitting teacher

Both submitting and non-submitting teachers shared objectives to "widen pupils' aspirations and careers opportunities" and "tick boxes" in terms of the school's

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1   A total of 10 teachers responded to this question out of 60 registrations.
2   This refers specifically to design subjects.
3   Exam content.

obligations to ensure pupils understand what careers opportunities exist for them. There were also similar incentives for the non-design teachers we spoke to, suggesting there is scope and appetite to widen the offer beyond the current intake of majority-design subject teachers. One, a STEM lead (science, technology, engineering, and mathematics) at a higher education college, registered to engage pupils in industry through working on a design brief for their T-levels and BTEC courses.

Insights suggest that the Pupil Design Awards allow teachers to run the Awards in a way that combines all of these in a relatively harmonious way.

How do teachers engage with the resources provided?

Suggested scheme of work

The teacher resource packs contain a suggested seven-week scheme of work, as well as activities from our partners Fixperts. Interview insights suggest these are viewed as a flexible resource to adapt, rather than to follow completely.

The framework was described as "clear", "helpful in adapting for lesson plans", as a "motivational booklet to go alongside the [briefs]", and as "really useful" for weaving into mock coursework. One teacher said that full delivery of all five stages depends on the time available, and that enough time would be needed to properly iterate and go through the cycles more than once.

Another admitted to being a bit "more fluid" than the suggested scheme of work, because from previous experience, trying to follow a schedule and not having the time to implement properly can feel "restrictive". Similarly, though they found the scheme of work helpful, it can be more difficult to stick to it with younger pupils who need more support with certain elements.

Briefs

Teachers praised the briefs for their flexibility and broadness, relevance to real-world issues, alignment with assessment materials, and clarity of problem definition. Teachers enjoyed the briefs for "opening up [pupils'] thinking", allowing pupils to explore a number of issues within one topic, and for enabling older pupils to grapple with "higher level", "outward-looking" concepts. One teacher described the briefs as what his school was "trying to get students to move towards, ready for when they start their [non-exam assessment] at the end of year 10".

Teacher training sessions

The teacher training sessions were described as an "opportunity to talk through the resources and think about how they'll work in practice". However, one teacher new to the Awards found she was already delivering some exercises with her pupils, such as the SCAMPER technique.[4] Similarly, the returning teachers we spoke to found they didn't feel the need to attend teacher training to faithfully complete the project, given their previous experience. In 2022-23, 16 teachers from 12 schools attended across the two sessions, with 83 percent of attending schools were state schools.

Mentor sessions

Mentor sessions remain a popular and "valuable" element of the Awards for both pupils and teachers. Pupils found the mentors' projects and career insights "inspirational", while teachers observed that pupils' design thinking had been "enriched" through the mentor programme, and that "having external mentors come in is really valuable", particularly for communicating design as a vocation to pupils. Not all schools are able to benefit from mentor sessions, with only six schools in 2022-23 receiving one.

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4   The SCAMPER technique is a team brainstorming technique used to develop or improve products or services. SCAMPER is an acronym for substitute, combine, adapt, modify/magnify, purpose, eliminate/minimize and rearrange/reverse.

Outcomes for pupils

Design capabilities

When asked how their understanding of design thinking had changed because of the Awards, the main theme that emerged across the three pupil focus groups was an improved understanding of how to design for others, taking users' needs, contexts, and responses into account, and designing proposals that benefit people who aren't like themselves.

Teachers also valued the Awards for supporting pupils to "broaden their horizons", to understand the "wider impact of design thinking" and getting them "out of their comfort zone" through research and testing. Instead of developing ideas "for them and their peers", teachers told us that the Awards supports pupils to "design for others" and supported them to understand design's role in improving society.

Many of the capabilities involved in design thinking were highlighted by pupils in focus groups as enjoyable and valuable elements of participation. These included: research, understanding a problem, teamwork and collaboration, and presentation and communication.

Like teachers, pupils also praised the "openness", "broadness" and variety of the briefs in enabling them to choose a specific problem to focus on leading to unique ideas. For one pupil, the briefs were structured in such a way that she "still knew what the brief required but it wasn't too restrictive".

For teachers, the five-stage, non-linear, iterative process as outlined in the resource pack was highlighted as an important element of the Awards. Pupils understanding that they're not going to get to a solution "in one go" was cited by one teacher as important preparation for GCSEs and A-levels, and they felt that the process led to better ideas overall. Another teacher agreed, summarising the importance of pupils going through the iterative design process:

"The pupils that have got the most out of it have done a really big leap in terms of their design thinking… They're thinking in a much more, kind of, degree-level way, or… professional design way, because they've had to respond to these difficult concepts. And they've had to fight through that difficult period. And then they've come out much more confident in thinking about wider issues". Year 12 submitting teacher

In an observation report, however, one of the mentors suggested pupils were "roughly" following the design process to get to their ideas, and that most pupils were following the process in a linear way. This was supported by pupils in focus groups, who spoke positively about the five-stage process, but more as a "helpful" framework to "structure ideas", "keep on track" and make it "easier to follow the project". It was also cited as being a helpful aid in communicating findings when submitting work:

"It taught us a load of skills in presenting a design idea in a way that's understandable… throughout our GCSE or A-level course, the teacher knows what you're doing the whole time so when you present it you're just trying to get everything to hit the exam points… Having that structure means that you create quite a clear story… Design is about communicating your ideas as well as making whatever you're doing". Year 12 pupil

Creative self-efficacy

For teachers, this deeper understanding of design thinking was key to engendering "confidence and creativity" and "empowering" pupils. The pupils we spoke to agreed and highlighted how different elements of the Awards had supported them to develop their creativity and their confidence. Part of this was due to engaging with community members to get feedback on their ideas:

"I started off being a bit anxious about [engaging people outside of the classroom]. But then I started to get positive feedback saying that 'what you're doing is really creative' and 'you should keep this up'. So that just made me want to do it more and get as many answers as possible". Year 9 pupil

When asked how they would feel about addressing similar social problems after having done the Awards, most pupils shared that they'd feel more confident. Many pupils expressed that understanding different facets of an issue and breaking it down through research was key in increasing confidence to propose design solutions:

"I feel more confident, because the way I've done the research and thinking about the different aspects to look into was really helpful… once you start researching it you look into lots of little bits and you get loads of ideas". Year 12 pupil

Pupils' awareness of real-world issues

This evaluation is also seeking to understand how the Awards contributes to pupils' understanding of real-world issues facing them and their communities, and how this is achieved.

Pupils in focus groups valued the relevance of the brief topics to current social issues, such as the cost of living crisis. One pupil highlighted the importance of keeping future briefs relevant to social issues, and individual's varied circumstances, as a way of ensuring more young people engage with the Awards:

"If you do briefs that are like close to… what society is going through now, I think… you'll get more personal, original, unique designs… People have different backgrounds and [statuses]. Nowadays, it's all about [being relevant]… if something's not relevant, no one's going to put their attention or ideas into it". Year 9 pupil

Other pupils spoke about the value of speaking to other people as part of the design process for understanding "exact problems", leading to iterations they wouldn't have otherwise implemented, and being able to compare beliefs and attitudes of different groups.

Our theory of change suggests that meaningful engagement with local communities is one of the mechanisms of change that leads to a greater awareness of real-world issues. Pupils were speaking to other people as part of their research, and then testing their ideas with them, through surveys and interviews. This was largely confined to other pupils, school staff, and family members, rather than members of their local communities.

Despite this, pupils demonstrated a clear grasp of the importance of speaking to other people during design processes, gaining insights about their brief had relevance to their school or village, seeing "how views vary [which is] useful to understand", and developing their ideas in ways that wouldn't have been possible without this engagement with others: it "helped with product development, expanded horizons, and showed me how to expand my idea". Another shared that it was "interesting to be exposed to a diverse spectrum of ideas, and hearing other people's feedback is really important".

The primary barriers pupils identified with speaking to people beyond their school and family were around how "hard" and "awkward" it would feel approaching people they don't know. Speaking to other pupils was easier given their proximity and the tight timeframes of the project. These pupils shared that having more time to spend on thinking how to engage with the wider community would have been beneficial.

Teachers raised similar challenges, such as tight timeframes, safeguarding issues, and the rural location of their school as barriers to more meaningful engagement with local communities. In future, they suggested that the RSA could provide clearer guidance around what 'good' or 'acceptable meaningful engagement' with community could look like on projects.

As mentioned earlier, teachers register for the Awards precisely because they hope it will give their pupils a more 'true to life' designer experience and "immerse pupils in real-world contexts beyond the classroom or workshop". Given these intentions, it is difficult to ascertain whether it is Awards, teachers' own motivations, assessment requirements, or a combination of all three, that leads to pupils gaining an improved understanding of real-world issues.

Other perceived benefits for pupils

For many, the experience of the Awards increased their confidence with regards to their coursework. The five-stage design thinking process was highlighted as a useful and "easy to follow" method to then "transfer to coursework". One pupil went as far to say that, out of the three they'd done that year, the Awards was "by far the best" practice coursework project.

Across all three focus groups, the opportunity the Awards provides for group work, particularly during the research phase, was highlighted as a supportive and enjoyable way of preparing pupils for individual work when it comes to GCSE or A-level coursework:

"Personally, for me, one of the best parts of the project was working with someone – it really helped with coming up with ideas. To discuss something through with someone is far more useful than trying to come with an idea by yourself". Year 12 pupil

Factors critical to faithful implementation

We spoke to both submitting and non-submitting schools to gain greater clarity over what specific factors supported teachers to complete the project, and what specific barriers prevented certain schools from doing so.

Enablers

Alignment with curriculum and assessment material

For some of the teachers we interviewed, the design thinking process and the content of the briefs align with the curriculum and assessment material of exam boards like AQA and OCR. As mentioned previously, some teachers choose to run the Awards as mock coursework for GCSE or A-level design subjects which facilitates integration with timetabled lessons, allowing greater time to deliver the project than would be allocated through extra-curricular clubs, for example.

Much of the project is built on a user-centred, non-linear, iterative understanding of the design process and provides "good practice for GCSE and A-level". Importantly, some teachers were more easily able to plan and implement the Awards in this way because they are subject leads or heads of faculty, so have greater autonomy over designing the curriculum.

Where teachers were not intending to run the Awards through design subjects, they were also thinking about how it would align with the content of BTECs and T-levels, or provide a more creative approach to A-level film and media.

Previous experience

As with the 2021-22 Awards, a recurring theme in interviews with teachers was that previous experience of running the Awards enabled them to plan their time better to deliver the project more effectively. With such high drop-off of schools, this insight suggests more could be done to support first time schools to manage delivery.

RSA resources and support

Teachers also praised the quality and quantity of the support that the RSA provides as part of the Awards, including the teacher and pupil resource booklets, the teacher

training sessions, mentor visits, and general communications. One teacher described the RSA's support as "immense".

"The real strength with the pupil Design Awards are the resources for the teachers and the toolkits for the pupils. [They] are really strong and really developed in supporting their design thinking for us". Non-submitting teacher

Challenges and barriers to completion

Two main barriers emerged from interviews which were; the amount of time it takes to support some pupils with the initial stages of the project, and scheduling clashes.

Time required to provide sufficient pupil support and scaffolding

Though teachers emphasised the broad but supportive nature of the briefs, this does mean that a lot of time has to go into implementing them effectively because of the often complex nature of the topics, particularly when supporting pupils to translate initial research into ideas:

"Being able to give it quite a significant chunk of our curriculum time has been worthwhile, but I think it does need that kind of time to be done properly… I think students find it hard because they're dealing with tricky social concepts. [So] that takes quite a lot of perseverance from us… I'm not saying it shouldn't be hard. I'm just saying, it kind of takes a bit of perseverance to deliver… I feel like it's quite time consuming to do well". Year 12 submitting teacher

This insight was shared by other teachers, who suggested that especially for year 9s, briefs can feel quite "abstract" and "challenging", whereas A-level pupils are more open to "a deeper understanding or appreciation" of the issues:

"We have to do quite a lot of breaking down of the brief… there's almost too much information for some of the younger students to cope with [and] take on board… there's quite a lot to digest". Year 9 and 12 submitting teacher

Teachers suggested clearer signposting to potential ideas or formats (for example a product or service and clearer parameters around locating a specific problem within the broader issue to reduce the "cognitive load" on pupils.

Timing and timetabling

The second main issue was one of scheduling. Some teachers found they were unable to submit more work because they were unable to commit as much time as they'd have liked to. They also suggested clearer communications about timelines would have been helpful. The Awards' submission deadline for 2022-23 (late April) also clashed with the delivery of exam revision and non-exam submissions, which some teachers found challenging.

All teachers, both submitting and non-submitting, spoke about challenges with timetabling – though they admitted this was a challenge across all areas of their work, not just the Awards, as well as for 2022-23 having a particularly tight time frame because of the combination of teachers' strikes and bank holidays falling around the same time. For this reason, one non-submitting teacher struggled to deliver the project towards the end of March/early April because of prioritisation given to revision.

Even where teachers submitted, these tight timelines caused issues:

"There were some groups that […] might miss one because of a strike, and then it'd be a half term, and then I've not seen them for six weeks. So that flow and continuity of what we're doing was sometimes a bit of a barrier". Year 12 submitting teacher

Inclusivity of the Awards

To understand how the Awards can be more inclusive of all schools, we also spoke to teachers who were unable to submit in 2022-23 to explore barriers to completion. Two teachers were non-design teachers in further education colleges new to the Awards, and one was a design teacher in an 11-18 state academy who had submitted previously.

Teacher capacity

For the two non-design teachers, onboarding pupils to the Awards while also upskilling them in new subjects at further education level proved to be a barrier to completion. One teacher had hoped to deliver the Awards through non-design subjects such as film and media but found the amount of content in these subjects too "restrictive" and "academised" to fit alongside the Awards in 90-minute weekly lessons.

For the returning design teacher, problems with the retention and recruitment of specialist design teachers reduced the capacity of the department to complete the Awards (a well-known challenge across schools and subjects, particularly design, maths, and science).[5.]

A lack of specialist design teachers at this school meant non-specialists were taking on their roles, leaving existing specialists too overstretched to deliver the Awards as an extra-curricular activity. Otherwise, this teacher suggested that they had everything they needed from the RSA, in terms of resources and support, as well as having the knowledge of running the Awards previously.

Indeed, the "learning curve" involved for first time teachers was also identified as a barrier by the two new non-design teachers, with one saying it "felt like a lot to take on". Teachers suggested more exemplar material from previous years would have helped them with this barrier to completion.

Nature of resources for some pupils

Though many teachers praised the briefs for their broadness and openness, some found they were not suitable for their pupils. For one of the FE college teachers intending to deliver the Awards as part of BTEC and T-level courses, the briefs didn't lend themselves to the specific industry focus required of those qualifications.

The other FE teacher suggested that the briefs felt too "abstract" for some of her pupils, particularly those who have fewer material and cultural resources to draw upon, and whose parents may be less supportive than those of their more advantaged peers:

"The type of students we get would need a lot of direction on where to take that abstract kind of concept. They wouldn't automatically know where to go with it really… certainly in this area, they don't have that wider cultural capital sort of thing… they don't necessarily have any kind of parental help at home… you know, their parents getting behind it, and monitoring what they're doing". Year 12 non-submitting teacher

Because of limited time, she reflected that much of the work would have had to have been done outside of lessons, which she thought would be a challenge for her specific cohort of pupils:

"I think that's probably an issue, certainly with the type of students we attract here, [working on the Awards outside of lessons] might be problematic, because they don't do any anything much for their A-level subjects outside of the classroom". Year 12 non-submitting teacher

This chimes with earlier comments from teachers about the challenging social concepts in the briefs, and the amount of time it takes to get some pupils off the ground. In other cases, the teachers leading the Awards have been faculty leads, or run the Awards before, which had helped.

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5   For more information see: www.theguardian.com/education/2023/jun/17/trying-to-find-a-maths-or-science-teacher-is-like-looking-for-a-unicorn-inside-english-schools-recruitment-crisis

5

Conclusions

What motivates teachers to register for the Pupil Design Awards?

- To widen pupils' aspirations and exposure to career options.
- To engage pupils in real-world design contexts beyond the classroom/workshop.
- To nurture capabilities around creativity, empathy, problem solving, and collaboration.
- To prepare pupils for GCSE/A-level non-exam assessments.

Does participating in the Pupil Design Awards lead to improved creative self-efficacy for participants? If so, for whom and under what circumstances?

- Average scores among those teachers taking our survey at baseline and at endpoint improved from 3.45 to 3.85 (on a five-point scale), suggesting some teachers are observing improvements in creative self-efficacy among their pupils as a result of taking the Pupil Design Awards. However, these scores were from a very small sample of participating teachers, so may not be representative of the full cohort of participating pupils.
- Further, as pupils did not answer directly, there is less clear evidence to suggest that the Awards are specifically fostering creative self-efficacy, though feedback from pupils and teachers suggests the Awards fosters creativity and confidence.
- Teachers saw going through the non-linear, iterative design process as key to engendering creativity and confidence in their pupils.
- Pupils reflected that their confidence grew through engaging with different elements of the design thinking process, such as using research to break problems down, and gaining positive feedback on their ideas through speaking to others.
- Pupils suggested they would feel more confident tackling a similar social issue having done the Pupil Design Awards.
- Some pupils reported feeling more confident in approaching their coursework having done the Pupil Design Awards.
- Does participating in the Pupil Design Awards improve the design capabilities of participants? If so, for whom and under what circumstances?
- The main theme that emerged through speaking to pupils was an improved understanding of designing for others unlike themselves, as well as the wider, social impact of design. Teachers also valued the Awards for supporting pupils in this area.
- Pupils valued the Awards for providing opportunities to cultivate other capabilities such as research, understanding how to tackle a problem, teamwork and collaboration, and presentation and communication.
- For teachers, tackling the briefs using the five-stage, non-linear, iterative process as outlined in the resource pack was highlighted as important for pupils to confidently arrive at design ideas.
- Pupils may see the design thinking process as set out in the resources as more of a helpful guide for structuring their work, rather than following it in a non-linear way.

Does participating in the Pupil Design Awards lead to pupils' improved awareness of real-world issues facing them and their communities? If so, for whom and under what circumstances?

- Pupils viewed the briefs as highly relevant and an important way to engage young people with current, real-world issues.

- Pupils shared that they spoke to family members and fellow school pupils, rather than members of wider local communities, due to a lack of confidence, school location, project timeframes, and the ease of speaking to more proximate individuals.

- Teachers raised similar challenges as barriers to more meaningful engagement with local communities.

- Despite this, pupils recognise the clear benefits of speaking to other people to facilitate understanding a problem in greater detail, as well as leading to developments and iterations that they wouldn't necessarily have achieved otherwise.

- Given teachers' motivations to register for the Awards to ''immerse pupils in real-world contexts'' it is difficult to ascertain whether it is the Awards, teachers' own motivations, assessment requirements, or a combination of all three, that leads to pupils gaining an improved understanding of real-world issues.

- What factors are critical in supporting teachers to complete the Pupil Design Awards?

- The main factor that emerged in enabling teachers to deliver the Awards faithfully was the ability to integrate it with curriculum and assessment materials, primarily as practice for GCSE and A-level non-exam assessments in design and technology.

- Other enabling factors include previous experience of delivering the Awards, and the quality and quantity of support that the RSA provides to teachers.

- Teachers value the openness, flexibility, clarity, and relevance of the briefs, as well as the support the RSA provides in the form of resources, teacher workshops, mentor sessions, and communication.

- For submitting teachers, challenges included the amount of time required to support some pupils with complex ideas in the briefs, timetabling clashes with revision for exams, and the combination of days lost due to teacher strikes and a higher-than-usual number of bank holidays at the beginning of the 2023 summer term.

- How can the Pupil Design Awards be more inclusive, particularly of schools from more disadvantaged backgrounds?

- Newer schools struggled to complete the Awards, with some feeling like there was a lot of material to take in. More time and effort should be taken to effectively onboard the greater number of state schools targeted for recruitment, and more exemplar material of previous winners should be provided.

- On-boarding pupils into new subjects at further education level, through vocational qualifications such as BTECs, T-levels or as part of apprenticeships, is a challenge, while at the same time ensuring they understand the demands of the Pupil Design Awards.

- Teachers reported that some pupils may find the social design focus of the briefs abstract or challenging, particularly those who have fewer material and cultural resources to draw upon, or where there is less of an expectation that they will work on their proposals outside of the classroom, or benefit from parental support.

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Recommendations for future delivery of the Awards

Communications/recruitment

- In communications encouraging schools to enter the Awards, emphasise how the Awards can be used to prepare pupils for GCSE and A-level non-exam assessments, linking specifically to the criteria of the AQA and OCR examination boards.
- Provide suggestions for how the Awards could be delivered through non-design subjects to attract a wider pool of recruits.
- Provide suggestions for how the Awards could be adapted for industry-focused requirements of BTECs/T-levels/apprenticeship courses.

Delivery

- Design and deliver bespoke teacher sessions for first-time registrants, with regular follow-ups to ensure they stay engaged through to completion and return year-on-year.
- Invite teachers who have delivered the Awards to share guidance and examples of how best to deliver the Awards for the first time.
- Explore an expanded role for Fellows/mentors in supporting pupils to break down complex issues in the briefs. These could take the form of dedicated sessions based around the brief topics in autumn/winter, including creative activities to unpack the concepts in the briefs.
- Explore an expanded role for Fellows/mentors to deliver a series of online/in-person workshops with groups of schools to plug the gap left by lack of specialist design teachers.
- To overcome pupil reservations around engaging with local communities, facilitate connections between schools and local Fellows to arrange for pupils to gain feedback on their ideas.
- Provide clearer guidelines for teachers around how pupils could approach wider community members for feedback and testing.
- Ensure more schools are able to benefit from mentor expertise through digital delivery or group sessions to widen participation.

Future evaluation

- Incorporating baseline surveys into registration is a high barrier to entry. As part of streamlining the registration and submissions process, support teachers to deliver baseline and endpoint surveys in lessons via a digital platform to reduce the amount of information teachers are asked to provide when first interacting with the Awards.
- Insights from qualitative data collection did not demonstrate a specific improvement in creative self-efficacy, and instead demonstrated evidence of improved confidence and creativity as separate outcomes. The theory of change for this project should be revisited and refined with particular focus on mechanisms and outcomes.

- As part of this, to more effectively measure creativity, confidence, and creative self-efficacy of participating pupils, explore the development of surveys to be completed by pupils, rather than teachers.
- Explore ways of understanding impact beyond submission numbers through monitoring and evaluation, eg teachers using resources to support pupil research in projects outside the Awards.

Appendices

Appendix 1: 2022–23 registered school locations

Registered schools	58
East	5
East Midlands	1
London	8
North-east	0
North-west	8
South-east	18
South-west	1
West Midlands	5
Yorkshire and Humber	6
Scotland	4
International	2

Appendix 2: List of all submitting schools

List of submitting schools (asterisks denote commended schools):

Alexandra Park School, London (state)

Bradfield College, Berkshire (independent)*

Merchiston Castle School, Edinburgh (independent)*

Notting Hill & Ealing High School, London (independent)*

Outwood Academy Haydock, St. Helens (state)*

South Hampstead High School, London (independent)

St Augustine's CE School, London (state)

Sutton High School, London (independent)

Thomas Gainsborough School, Suffolk (state)

University College School, London (independent)*

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