

SHAPE in Schools: Changing mindsets in support of social sciences, humanities and the arts

Social sciences, humanities and the arts are vital for addressing complex challenges, but do young people truly understand their value? **SHAPE in Schools** aims to increase the visibility of these subjects and demonstrate how SHAPE thinking is not only enriching for students, but also necessary for society.



What is SHAPE?

SHAPE stands for Social sciences, Humanities, and the Arts for People and the Economy/environment. It aims to help us understand the collective power and importance of these subjects, which are integral to solving global issues. Rather than being in conflict with STEM (science, technology, engineering and mathematics), SHAPE complements it. SHAPE and STEM depend on each other, and a prosperous society prioritises both.

The SHAPE in Schools pilot

A pilot programme for SHAPE in Schools was introduced to 11 secondary schools

across Wales, Scotland, Northern Ireland and England from November 2020 to June 2022, with almost 1,000 learners aged 12-14 taking part. Evaluations from each year detail both the baseline learner attitudes to SHAPE subjects and the positive impact of engaging learners in workshops, which were designed to increase the visibility of SHAPE and highlight the connectivity between SHAPE subjects and their daily lives.

Organisations involved in SHAPE in Schools

British Academy, London School of Economics (LSE), Cardiff University, UK

the links between the different subjects within SHAPE, and challenging teachers and learners to understand their personal connection with SHAPE. The outcomes of these efforts were then recorded and studied.

Baseline attitudes and understanding

The SHAPE in Schools team surveyed students' perspectives on STEM and SHAPE subjects and gained some interesting insights. First, they found that students' understanding of which subjects fall under STEM and SHAPE was often quite patchy. For instance, almost a third of students thought that English was a STEM subject, suggesting that STEM is mistakenly perceived by students to relate to 'core' subjects in the curriculum. The definition of social sciences was also poorly understood, with a third of learners including biology, chemistry and physics within it. This indicates that an initial challenge is to help learners understand the definitions of these umbrella terms, why they are useful, and how they interlink with one another.

Recent years have seen a strong drive in encouraging school students to take up further education and careers in STEM subjects. This is with good reason: science and research careers are vital to the UK and a global society, helping to develop technologies and our understanding of the world around us. However, an unfortunate side effect of this push has been the growing perception of SHAPE as the 'poor cousin' of STEM, with SHAPE careers sometimes considered as less preferable or even inferior. Such attitudes filter down to school students, who may be led to dismiss prospective careers in SHAPE, even if that is where their skills and interests are best aligned.

SHAPE subjects are, in fact, just as vital to

society as STEM. Lessons from SHAPE form the cornerstone of governance, culture and community. While developments in SHAPE might be less tangible than, say, a new medicine or technology, they teach us important lessons in how to make modern life fulfilling, just and resilient. Society depends on creatives just as much as scientists.

SHAPE in Schools is a recent initiative to boost the visibility and interest in SHAPE subjects within schools. A recent pilot study funded by the LSE trialled ways of achieving this, engaging with teachers and learners in 11 schools across the UK through a range of activities. This has involved creating innovative resources, training teachers as SHAPE practitioners, demonstrating



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Students were asked to categorise school subjects as social sciences, STEM, humanities or the arts.



Social Sciences

Business: 43% correct
(36% humanities)
Politics: 47% correct
(38% humanities)

Humanities

English: (41% humanities, 31% STEM)
Modern languages: (24% social science, 12% STEM)
History: 80% correct
Religious studies: 77% correct
Geography: 76% correct

STEM

Physics: 57% correct
(c34% social sciences)
Chemistry: 56% correct
(c34% social sciences)
Biology: 55% correct
(c34% social sciences)
ICT, PE, Health and Food Technology:
lower % correct

Arts

Art and design: 97% correct
Music: 73% correct
Drama: 68% correct

Students' enjoyment of different subjects was also surveyed. On average, learners displayed a preference for STEM subject groupings over SHAPE subjects, but, when it was examined in more detail, it was found that male learners showed a strong preference for STEM subjects, while female learners showed a slight preference for arts subjects. Surprisingly, when learners were asked to rank the 12 individual subjects, the overall favourites (for male and female learners) were art and design, physical education and English. However, students ranked STEM subjects as more important than SHAPE subjects for their future careers – a starker difference than when ranking enjoyment.

Modes, methods and mindsets

The underlying framework for SHAPE in Schools follows the concept of 'modes, methods and mindsets'. This concept captures one way in which SHAPE subjects can be thought about, and inspires the SHAPE in Schools materials for teaching and learning.

Modes are the 'building blocks' of learner resources. These are typically real-world examples that can be used as a starting point for deeper thinking about SHAPE ideas. This might be a direct source of information, such as a film, book or quiz, or it might be an object to provoke deeper thinking. In the pilot project, four objects – masks, trains, sugar and shoes – were the modes for the workshops.

Methods describe the ways of teaching or exploring SHAPE concepts. They come under three levels: methods used to create resources; methods used to encourage learning; and methods that learners practise. It was important for the pilot to emphasise the interdisciplinarity of SHAPE through these methods, by capturing how the objects related to different aspects of society and, more immediately, different parts of the curriculum.

Mindsets describe the influences on patterns of thinking: considering one's own perspectives and lived experiences, as well as the perspectives of others in society. These ways of thinking are important skills in themselves, and their development is encouraged within SHAPE in Schools.

Object-based learning

The pilot project invited teachers to training sessions, where they were introduced to the SHAPE approach and ways to put it into practice within their lessons. A key method for doing this was object-based learning (OBL). More commonly practised in museums and galleries than schools, OBL uses objects to challenge people to think about these objects' role in society, how this role has changed over time, and how this links to wider societal trends and meaning.

Teachers then used the OBL method with students through workshops, which focused on masks, trains, sugar and shoes. The purpose was to explore these everyday objects through the lens of different SHAPE subjects. Learners were also given a 'disorientating experience', the idea of which is to challenge preconceived ideas of these common items. For instance, for shoes, questions included:

- What are the roles of shoes in our culture and identity?
- What might be the environmental impacts of shoes?
- How are people's lives affected if they cannot access shoes and are experiencing shoe poverty?

The aim of these exercises was to create a personal connection between the learner and the SHAPE experience, by stimulating curiosity in the everyday and demonstrating how SHAPE is embedded in the world around us. Because there are no wrong answers to these exercises, students can be more confident in engaging with their learning and presenting their opinions and thoughts in their own terms.

Key findings

Students' understanding of, and attitudes to, SHAPE subjects were assessed via surveys and interviews before and after the workshops. Once the pilot was complete, the SHAPE in Schools team used this research to evaluate the overall experiences of teachers and learners.

Visibility

SHAPE in Schools aims to make SHAPE subjects more visible in secondary schools, through the creation of resources and training teachers to act as SHAPE ambassadors. Teachers responded very positively about the training experience and resources provided. They demonstrated their understanding of the methods and mindsets at the heart of the SHAPE workshops, especially how the different subject areas interlink and affect one another. Some teachers also went on to train other teachers to support delivery of SHAPE workshops. The style of teaching was noticeably different from typical teaching styles, with teachers saying they enjoyed exploring OBL as an alternative to more traditional approaches.

Relevance

It was important that the workshops helped learners understand the real-world relevance of SHAPE subjects. Many learners said the workshops helped them to see how different

After the SHAPE workshops:

67% of learners were more interested in learning about SHAPE subjects

54% of learners said they were more likely to consider a SHAPE-related career

58% of learners said they were more likely to take SHAPE subjects for post-16 qualifications

78% of learners said they could see the connections between SHAPE subjects (up from 56% before)

51% were more likely to take part in SHAPE-related activities such as visiting museums, listening to live music, or go to dance classes.

42% were more likely to talk about SHAPE subjects with others

SHAPE subjects interlinked and connected to one another. Many also commented that drawing these connections, as well as the OBL method, had been an enjoyable experience, and a number said they were more likely to opt to study SHAPE subjects in later key stages as a result of the workshops.

Personal connection

A key objective of the workshops was to inspire enjoyment and interest in SHAPE subjects. Many learners and teachers reported that the learners had enjoyed the workshops and that their overall enjoyment of SHAPE subjects had increased. Many learners also felt the workshops helped them understand the connections between SHAPE subjects. Highlights included the opportunity to work as a team, being able to use creativity and design skills, and put their imagination to work.

Why SHAPE in Schools is important

With STEM subjects being promoted by both national and regional campaigns, SHAPE subjects (and their teachers) can feel like they have been side-lined. It is vital to address this by building an appreciation of the importance of SHAPE subjects and help nurture the next generation of talented SHAPE professionals. STEM and SHAPE are not adversaries, but allies, and SHAPE in Schools aims to make this apparent.

In terms of how teachers can promote SHAPE subjects within their schools and classes, adopting the mindset of interconnectedness is an excellent way to begin. Collaboration is key to this. Working with colleagues across subjects can help foster these connections, which can then be transferred to lessons: discussing colour theory in science, sonics in drama, technology in human geography – the links are endless. There is then further scope to create a network between schools, where teachers can inspire and educate one another on the SHAPE mindset and how to apply this within their lessons.

Embracing such efforts can bring big benefits for both learners and teachers. Education shapes the way people think and act, so ensuring that learners enter the wider world with a broad perspective is important. Given the positive response to the pilot programme from teachers and learners, the SHAPE in Schools team is now looking to make the resources widely available so that teachers and learners around the nation can access them themselves. The hope is to garner the support of schools' senior leadership teams and SHAPE subject teachers alike to promote a balanced and interconnected curriculum, where no subjects within SHAPE and STEM are considered in isolation, but as parts of the great societal ecosystem.

Meet some of the experts behind SHAPE in Schools



Julia Black

Strategic Director of Innovation and a professor of law at the London School of Economics and Political Science (LSE) in the UK. Julia is also the 31st president of the British Academy and one of the architects of SHAPE.



Claire Gorrara

Dean of Research and Innovation for Arts, Humanities and Social Sciences at Cardiff University, UK.



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Lucy Jenkins and Tallulah Machin were instrumental in the design and delivery of the SHAPE in Schools pilot programme.



Lucy Jenkins

Project Director of the Modern Foreign Languages Mentoring Project within the School of Modern Languages, Cardiff University.

Alongside this, Lucy researches language policy, multilingualism, interdisciplinarity and digital technologies.

"I would like to see learners being exposed to learning experiences that spark a conversation about SHAPE subjects. I want learners to be informed, empowered and excited about SHAPE and to understand that it is relevant to them."



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Tallulah Machin

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Education consultant and researcher specialising in the design and delivery of education projects and the development of interdisciplinary learning experiences.

"I would like to see senior leadership actively promoting a balanced and interconnected curriculum; teachers feeling valued and supported so they can work together to show learners the interconnections between subjects; learners excited about all subjects because they see how they fit together and how valuable they are for us as individuals and as a society – linking together their school subjects with the world outside of school."