



British Human-Computer Interaction Conference 2024

Design and Research Competition

A Teachers' Guide

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British Human-Computer Interaction Conference 2024: Design and Research Competition

This documentation has been designed to support teachers in delivering the [Design and Research Competition](#) for British HCI 2024. This years theme is around *Society 5.0: Future Digital Technologies*.

Why Society 5.0?

As humans we've built various societies throughout history. Societies evolve, people invent new things and new problems arise. Each society has it pros and cons. We can learn from the past to build a better future.

It all started with:

1. Hunter-Gatherer Societies: The Very Beginning. These were like small tribes (groups), traveling around to find food. They were experts at hunting, fishing, and finding fruits and nuts.
2. Agricultural Societies: When Farming Changed Everything. People learned to farm, so they settled in villages and didn't have to move so much. They planted crops and raised animals, so they always had food nearby. Not everyone had to hunt or gather anymore. Now there were farmers, builders, and even leaders!
3. Industrial Societies: The Machine Revolution Factories! Instead of making things by hand, big machines in factories made them much faster. People left farms for jobs in factories, so big cities grew quickly.
4. Information Societies: The World We Live In! Computers and the Internet changed everything! Now information travels super-fast. We talk to people around the world easily. We buy stuff made far away. We find information online in seconds, not just in books.
5. Smarter Technologies: The next wave involves utilising smarter technologies and information to solve problems and create a new future where everyone has a good life.

Who might it affect?

Society 5.0 has the potential to affect everyone in various ways. As individuals in our daily lives and in the jobs we do. As communities creating accessible and sustainable concerns. But there are many things to consider such as the ethical implications about privacy, data security, equal distribution and ultimately who benefits from such advancements. In particular the economy (new industries, job market) and social issues such as poverty, climate change and healthcare.

How can we get started?

Children all over the world are invited to submit their initial ideas in response to the theme "Society 5.0: Future Digital Technologies". Submissions can be made by individuals or teams of children from a classroom, after-school program, club, maker space, or combinations from different schools, clubs, towns, or countries. Each individual or team is invited to fill out a simple form with a brief description of their idea along with drawings, pictures or other forms that best express an initial impression of the idea. The ideas received will form the basis for the second phase of the Research & Design Challenge.

You might submit a storyboard, sketch of a product, LEGO model with documentation, sketches etc.

To help teachers, we've provided the following ideation scaffold. The purpose of this activity is to help children with structuring their ideas. You do not need to follow this, nor do you have to stick with the defined sections. But it may help those who are struggling. A coloured print out for children can be found on the following pages.

For the ideation to work:

- Choose **1 demographic** of people to solve a problem for.
- Choose **1 area** to focus on.
- Choose **1 challenge** to frame your idea around.
- Choose between **1-3 magic tools** to solve your problem.

Ideation Cards

People	Areas	Challenges
Newborn	Education	Ethical concerns
Elderly	Healthcare	Data security and privacy
Families	Cities	Fairness
Students	Farming	Accessibility and inclusion
Young people	Transportation	Poverty
Children	Manufacturing	Climate change
	Public safety	Social good
	Retail	Disaster/crisis management
	Finance	Customer service
	Entertainment	Getting old
	Security	Digital divide
	Space exploration	Cyber threats
	Construction	

Imagine you have a magic toolbox full of tools that help you do amazing things with them. Below is a list of these magical tools and what technologies we might use to facilitate the operation.

Magic	Technologies	Explanation
Machine	Artificial Intelligence	Recognises patterns and make intelligent decisions in fast times
Senses	Internet of Things	Sensors are connected to the Internet to provide rich and meaningful information to collect data and provide varying experiences from smart homes -> cities to farming and manufacturing
Wizard	Big Data & Analytics	Will provide expert knowledge as large amount of data are collected
Hands	Robots and Automation	Help with making tasks easier, working with humans to support day to day living

Googles	Virtual Reality	Being fully immersed in an experience
Vision	Mixed Reality	Can support training and learning for new experience
Wand	Augmented Reality	Will support you in the tasks you are working on
Life	Biotechnology	Growing food in new ways, personalised medicine, cleaning up pollution
Body	Wearables	Worn on people's bodies to help collect and provide information about how a person is feeling and provide assistance
Fuel	Solar, Electric, Hydrogen, Gas, Battery	Ways to power electrical devices

Remember Society 5.0 is all about creating a new future for a better life.

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