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Dancing with the Digital: An epistemic insight-based workshop designed to bridge disciplines and spark students' epistemic creativity

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Research Domains

Learning, teaching and assessment (LTA)

Abstract

This article describes a workshop that brought together students specialising in the sciences with students who specialise in the arts – with the aims of providing them with activities through which to learn about their own and each other's disciplines and perspectives on the world together with a stimulating space in which to create new knowledge. The workshop we describe here was designed and run as a pilot study to explore the potential benefits and limitations of this idea.

Full paper

The importance of cross-disciplinary education

Thinking and working across disciplines, particularly science and the arts, is perceived as an important competency in which to tackle the seismic challenges of digital / technological disruption and socio-political change within the 21st Century (AdvanceHE 2022). With these thoughts in mind, researchers with the Epistemic Insight Initiative sought an opportunity to create an encounter for students from two specialist disciplines that are on opposite sides of the science-arts divide. This paper describes the first workshop for the

research which was delivered as an enrichment session for students on the BA (Hons) Dance Education and BSc (Hons) Computer Science courses at Canterbury Christ Church University.

Epistemic Insight (EI) means ‘knowledge about knowledge’ and particularly, knowledge about disciplines and how they interact (Billingsley et al 2018). The primary aims for the session were for students to learn about their own and each other’s questions and disciplinary perspectives on the world. The aims of the research were to discover the extent to which collaboration across courses stimulate creative responses allowing greater ideas and possibilities to flourish.

Workshop Part 1: the initial encounter

In the first section of the workshop, the tutors employed an EI strategy of posing a Bridging Question – which is a question that is pedagogically designed to bring the two disciplines together. Bridging Questions provide a fertile space for discussion about the similarities and differences between the disciplines, an objective in the Epistemic Insight Curriculum Framework (see Figure 2). The participants were asked: Can a computer algorithm produce dance?

To stimulate discussion, the students were shown a video example of ‘dancing robots’. The dancing robots in the video generate an uncanny effect in the viewer and provocatively disrupt typical disciplinary boundaries, suggesting a merging and blurring in which each discipline affects the other. The students were firstly asked to consider the question from the point of view of their own discipline; and then to discuss with students from the other discipline.

In contrast to a Computer Science mindset, the Dance students asserted that there was ‘much more to the moving body than the movements you see’; the dancer was always making cognitive decisions and embodied responses that were concerned with the qualitative ‘meanings and expressions of the movements’ – both groups of students agreed that computer algorithms used to produce the dancing robots could mimic these responses, but could not create the meanings and expressions sensed through the quality of human experience.

Workshop Part 2: New Ideas and Creative Works

Having considered different methods of understanding (the EITHER / OR associated with different disciplinary lenses in relation to a question) the students were then given a collaborative space to critically explore how two disciplines might converge. In interdisciplinary groups, the students were asked to consider how the potential of the two disciplines might interact to produce an effective intervention.

During this collaborative activity, students worked together in an interdisciplinary group. When considering the concept of movement and pressure, whereas the computer scientists viewed pressure as a measurable quantifiable factor to execute procedural inputs and outputs, the dancers perceived pressure in terms of more refined expressive and symbolic gestures – one dance student stated that pressure for them was to ‘walk, whip, flow, meander; it wasn’t just understood in terms of [quantifiable] power’. This tendency to interpret these different strands through particular disciplinary lenses was also apparent in the tutor’s dialogue with students too – although not exclusive, each tutor focused on their own epistemic lexicon; computer scientists focused on how the body could be negotiated with quantitative inputs, whilst the dance specialists highlighted the body’s relation with qualitative outputs.

Conclusion

Our research questions was to discover to what extent can collaboration across courses stimulate creative responses, allowing greater ideas and possibilities to flourish. We saw some evidence of students producing new creative works during the workshop. In the plenary one of the dance students commented that the dialogue and interaction provoked new creative ‘ways of thinking and possibilities within their own work that enhanced their practice’. As a Computer Science student pointed out, the intervention drew attention to the fact that there was a ‘lot more possible interactions between the two [disciplines] than you would initially think’. The key limitation identified by students was that was there was not enough time and opportunity to fully explore the tools, forms, strategies and processes in any concrete practical way – this was a recommendation for future interventions, providing students the

opportunity to bring to fruition their combined, interdisciplinary ideas.

References

Advance-he.ac.uk (2022) Advance HE Strategy 2021 - 2024 | Advance HE. [online] Available at: <https://www.advance-he.ac.uk/about-us/advance-he-strategy-2021-2024> [Accessed 14 April 2022].