Advancing Education
Journal; Issue 1
Autumn 2024
ISBN: 978-1-7397517-8-4

ADVANCING EDUCATION

Image credit: Ian Schneider, Unsplash

ADVANCING EDUCATION: A New Chapter!

Contents

Editorial

Dr Christina Preston

Welcome to the Autumn issue of Advancing Education, where we explore perspectives on integrating technology in education through art and AI, collaboration in computing, and inclusion. In this edition, TPEA have joined Naace members to share our professional knowledge and expertise with a wider readership base.

The field of edtech continues to evolve apace, driven by advancements in artificial intelligence, interactive media, and digital collaboration tools. This issue reflects our commitment to engaging critically with how digital innovations are shaping contemporary education.

This edition features three themes. The first theme is *Art and AI*, where our authors explore the affordances and challenges associated with AI. Our second theme, *computing collaborations*, explores the ways in which computing can build relationships through communities of practice, the role of collaboration in learning to teach computing, and shares the voices of the next generation of computing educators. Finally, we have the theme of *inclusion*. This theme features articles that discuss equality, access, and digital literacy. It finishes with a reflective piece of poetry musing upon the children COVID-19 impacted the most and whose voices are still not heard in a meaningful way.

The issue brings together voices from a range of disciplines. Jane Mills' exploration of generative AI in fashion education shows how digital tools can enhance creativity and equip students with skills for future industry challenges. With a similar focus on future employability, Elizabeth Hidson's article on PGCE trainees' use of edtech highlights how it can offer new pedagogical approaches for classroom challenges such as assessment, gamification, and behaviour management, calling for more structured edtech policies in teacher training.

The collection goes on to address topics such as social media literacy and digital accessibility. Caroline Haythornthwaite's article invites us to reconsider what it means to engage ethically in online spaces. Ann Marcus-Quinn and Jamie Sullivan examine the role of accessibility statements on school websites in Ireland, highlighting our shared responsibility for inclusivity.

Other aspects of edtech explored in this issue include the benefits and challenges of using XR tools in teaching and learning and approaches to teaching algorithmic and computational skills with young pupils in primary schools.

We hope you find our contributors' insights inspiring and that they spark ideas on how we can collectively shape a responsible and resilient education system.

We would like to thank the team of illustrators, copy writers, and contributors for their hard work and dedication to producing this edition.

Happy reading!

Helen, Emma, and Christina

Editorial Staff

L to R: Helen Caldwell, Emma Whewell, Yasemin Oezcelik

Welcome from the Chairs

Dear Colleagues,

I am writing to update you on several exciting developments within the Naace community and to extend an invitation for your ongoing engagement with our shared mission of advancing ICT in education.

Naace Research Project

Our ongoing research project focusing on exploring the latest trends and challenges in the integration of ICT within education is still live, and we are keen for as many schools as possible to contribute. This study aims to gather insights from schools across the UK, examining how digital tools can best support learning, teaching, and school management. We encourage you to invite any schools that you work with to contribute. The link to the survey is:

https://www.naace-research-hub.co.uk/research

ICT for Education Conferences

The ICT for Education conferences continue to be an outstanding platform for sharing knowledge, learning about emerging technologies, and networking with like-minded professionals. Naace has a presence at all of the upcoming conferences, which feature discussions on innovative classroom technologies, safeguarding in the digital world, and strategies for enhancing student engagement through ICT. The next event will be held at Aston Villa Football Club on the 8th November 2024. Bookings for this and future events can be made here: https://www.ictforeducation.co.uk/conferences/

Life Membership for Steve Moss

On behalf of Naace, I am delighted to announce that Steve Moss has been awarded Life Membership in recognition of his many years of dedicated service to the field of educational technology and his involvement in Naace. Steve's contributions to the community have been instrumental in shaping our direction and strategy, and we are incredibly grateful for his time, creativity, support, and stewardship of the organisation. Please join us in congratulating him on this well-deserved honour.

Sharing Good Practice

Finally, I would like to make a special plea to all members to continue sharing examples of good practice from your schools, trusts, and networks. Naace has always thrived on collaboration and the collective wisdom of its members. Whether it is an innovative use of technology in the classroom, a successful staff development initiative, or a creative solution to a common challenge, your stories are invaluable to the community. We encourage you to share these through our forums, publications, and events. Further details of a new school improvement network for schools will be released shortly.

Thank you for your ongoing commitment to Naace and to the advancement of ICT in education. Together, we can continue to drive progress and make a real difference in the lives of learners.

Warm regards,

Gavin Hawkins
Chair, Naace

TPEA News

TPEA has been running an annual conference to bring together researchers and practitioners since the 1980s, and this July, our 36th conference was held in Manchester at the Friends' Meeting House. The theme of our conference was 'Facing the future: Are we ready for change?', and we heard from a wide range of speakers about the work and intentions for the future of educational technology. A digital conference brochure including an overview of some of the sessions and some videos of our speakers is now available online at: https://tpea.ac.uk/2024conference/ It was great to see so many Naace and TPEA members present, and we look forward to meeting you again at our next event.

We also continue to publish our internationally recognised, peer-reviewed journal *Technology, Pedagogy and Education* five times per year. This year, articles have been published by researchers across the world investigating different technologies and pedagogical approaches in vastly differing contexts. The journal is available online at: https://www.tandfonline.com/journals/rtpe20 We are always interested in submissions from Naace and TPEA members. We are also looking for new peer reviewers, so if you are an experienced researcher who would like to contribute to peer review, please do contact our editor, Sarah Younie.

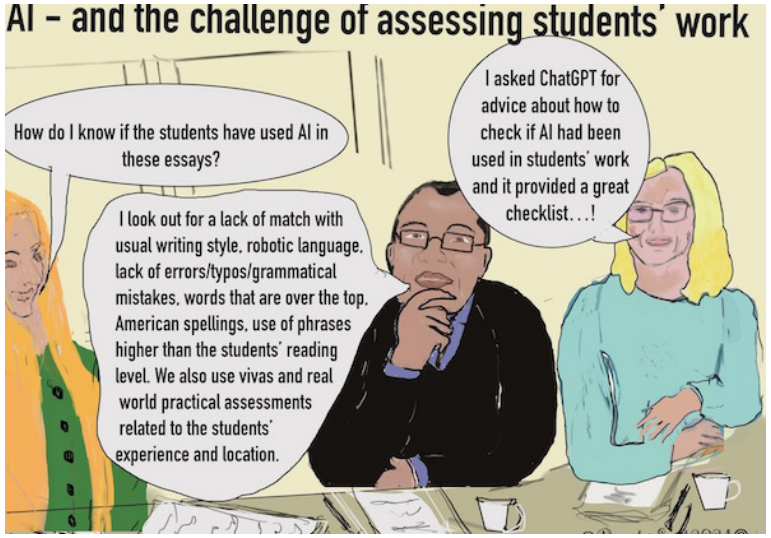
This year, we have widened the scope of our TPEA research and development grants. These are now open throughout the year and provide grants of up to £1000 to support both new research and the dissemination of completed research projects. We invite members to apply at: https://tpea.ac.uk/funding-opportunities/

Dr Chris Shelton
Chair, TPEA

Tribute to Jon Audain

We are very sad to announce the death of our multi-talented colleague, Jon Audain, who died in September of cancer. Jon, who was a lecturer at Winchester University, played a major role in TPEA and MESHGuides, as well as conducting a local orchestra. He leaves a wife and two small sons.

Marilyn Leask has referenced him in her cartoon in this edition, and we plan an article in the next edition about this extraordinary man. If you have a story or anecdote about him, please send it to me for this tribute at: christina@mirandanet.ac.uk.



Art and AI

Embracing Generative AI in Fashion Education

Jane Mills

Images: Mixed media fashion illustration research project created by Jane Mills

In my role as an educator, I have witnessed firsthand the rapid evolution of technology and its profound impact on the design and fashion manufacturing sectors. One of the most exciting developments in recent years is the advent of generative AI (GenAI).

GenAI is transforming the fashion industry, from product creation to trend forecasting, retail, and supply logistics. As educators, it's our responsibility to equip our students with the skills and knowledge they need to thrive in an increasingly digital and AI-driven world.

This technology is revolutionising both the fashion industry and education by integrating (GenAI) into the curriculum by preparing students with relevant and advanced skills, it gives them a competitive edge. It's crucial for higher education to keep pace with rapid technological advancements and equip students to meet the challenges and opportunities presented by GenAI, particularly as they gain access to various digital tools with embedded GenAI capabilities.

At a recent Digital Northants Merged Futures conference in June, I took the audience on a journey through the development of text-to-image models, discussing early explorations in GenAI through to the present day. These models have progressed to the point where it is virtually impossible to distinguish between what is real and what is not. While many have raised concerns and find this prospect daunting, I believe that if used ethically and transparently, it represents an exciting opportunity. Human creativity has always been boosted with each new breakthrough in technology, from the invention of the printing press to the digital technologies of today.

Images: Mixed media fashion illustration research project created by Jane Mills

Integrating AI into Fashion Education

As a fashion educator, I find the integration of AI into our curriculum incredibly exciting. At the University of Northampton, we encourage our students to collaborate with AI, balancing human creativity with machine efficiency. This approach is not about replacing human creativity or expression but ethically working alongside it to enhance the creative process.
Aligned with the University of Northampton's proactive stance on acknowledging and integrating GenAI ethically, we are committed to building

our staff and students' critical AI literacy. In the fashion subject area, we have introduced and piloted a digital tools logbook. This logbook allows students to document their entire journey with GenAI, showcasing how they use these tools to support the development of their creative concepts and to evidence their journey.

The digital tools logbook provides a structured framework for students to explore and utilise GenAI confidently for brainstorming and research. It encourages them to reflect on their processes and outcomes, fostering a deeper understanding of AI's role in their creative work.

However, the use of AI also raises important ethical questions about originality, authorship, and potential biases. It's essential to address these issues within our curriculum, promoting critical thinking about the ethical implications of AI in design.

By doing so, we ensure that our students are not only adept at using these advanced tools but are also mindful of the broader impacts of their use.

Developing AI Literacy Skills

Students need to learn about the basics of GenAI, such as what it is, how it works, and what it can and cannot do. They also need to be aware of the ethical, social, and environmental implications of AI, such as its impact on privacy, security, bias, and sustainability. Developing AI literacy can help students become informed and responsible users of GenAI.

As students gain valuable experience using this transformative technology, encouraging critical thinking about the implications of AI is crucial. These tools can inspire students, demonstrating diverse applications of GenAI and highlighting how they can tailor the technology to their individual creative needs, thereby enhancing their employability skills.

Practical Applications

Generative AI serves as a powerful tool for students to explore endless design possibilities; by inputting various design elements and parameters, students can generate unique concepts that they might not have conceived through traditional methods. This not only enhances their creativity but also pushes the boundaries of conventional design. Incorporating AI tools like DALL-E, Stable Diffusion, and Leonardo in practical project assignments allows students to generate initial ideas, brainstorm, and kick-start their creative design concepts, followed up by manual and physical sample development.

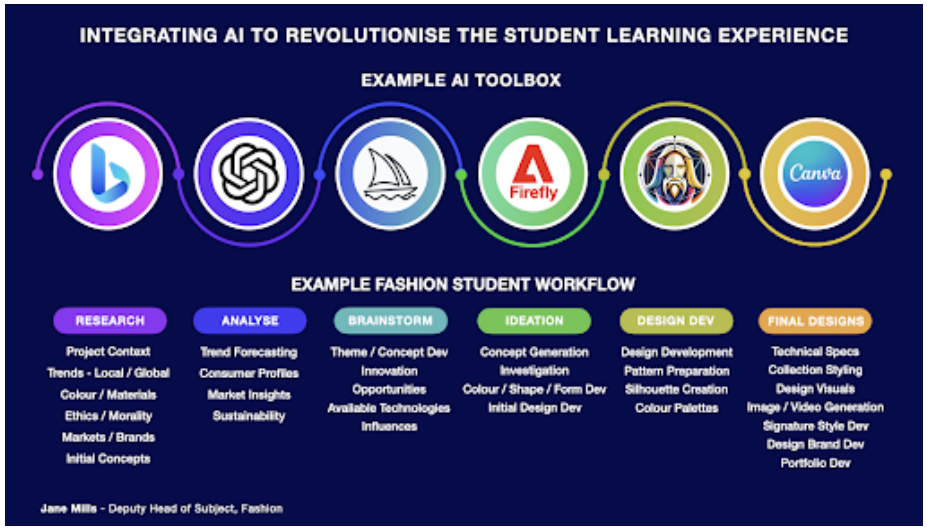


Image: AI Toolbox created by Jane Mills

Brainstorming creative design concepts is one of the most exciting applications of Gen AI. For example, I introduced an AI workshop to final-year students at the early stages of their projects, where they explored how to create effective prompts based on their own creative proposals. Learning how to develop effective prompts is crucial to getting the best out of GenAI.

The workshop provided students with practical insights and hands-on experience by exploring prompts around their own creative design proposals.

They started with fairly basic prompts and then gradually refined them based on the outputs that they were generating. This session, supported by the Creative AI Toolbox I created for the workshop, helped students define the parameters and elements that were important to developing their personal projects.

This workshop not only sparked their creativity but also led to innovative ideas that they further developed with physical sample explorations and prototype development. It helped the students move forward more confidently and effectively with their ideas, helping to push the boundaries of conventional design.

Students Developing AI Literacy

Students have embraced GenAI as a brainstorming tool, finding it particularly useful for the initial stages of the design process. This academic year saw the first integration of AI skills into students' final-year fashion collections.

Case Study 1: Exploration of Alternate and Parallel Realities

Vimisha Patel – Printed Textiles for Fashion Collection 2024

Vimisha Patel is a final-year Textiles for Fashion student whose final year concept explored alternate and parallel realities for her creative design concept. By integrating GenAI and combining digital printing technologies with traditional hand screen printing techniques, Vimisha was able to create unique and innovative printed textile designs that vividly expressed her visionary concept.

Case Study 2: Sculptural Fashion Inspired by Marine Ecosystems

Mellonia Gray – Sculptural Leather Fashion Collection 2024

Final-year fashion student Mellonia Gray mainly used large language models like ChatGPT to gain insights into the importance of plankton and its role in marine ecosystems, which include fish, birds, and marine mammals. She drew parallels between plankton's role in the ecosystem and her own life as a mother of five, realising that she was the 'plankton' of her family, vital to their survival and well-being.

This personal revelation became a pivotal point in Mellonia's creative direction, it inspired her to develop sculptural pieces using traditional leather techniques.

She explained that she preferred interacting with ChatGPT while her children were asleep, finding it more personal and interactive than simply using Google. This allowed her to ask questions freely, no matter how simple, and receive detailed, conversational responses.

This interaction helped Mellonia to push the boundaries of conventional design and supported her in developing a unique, personal, and meaningful fashion collection.

Case Study 3: Printed Textile Collection Inspired by Dreams

Florence Grewal - Textiles for Fashion Digital Print Collection 2024

Florence Grewal is a final-year Textiles for Fashion student whose creative concept draws from her personal struggles and triumphs. She explores how the purpose of dreams evolves, believing that many people lose touch with their dreams, which impacts their passion, creativity, and joy. Through extensive research on historical art movements and scientific studies and by combining GenAI with her own original photography to create three-dimensional collages, she has created a range of unique digital prints. Her aim is to inspire joy and creativity, offering a brief escape from the mundane and reminding people of the power and importance of dreaming.

Undoubtedly, the adoption and incorporation of this groundbreaking technology will raise significant challenges that higher education will perhaps find a difficult path to tread. However, I see that GenAI is an unstoppable force, and its integration into the curriculum is crucial for preparing the next generation of designers, and by embracing this technology, we can foster a more innovative, personalised, and sustainable approach to design education.

As educators, I believe it's our responsibility to equip our students with the skills and knowledge they need to thrive in an increasingly digital and AI-driven world.

Jane Mills is Deputy Head of Fashion at the University of Northampto, She is a member of the UON AI Steering Group and a member of the Study Smart: Staff & Student Co-constructing AI Literacy Research Group.

Creative Technology: A Familiar Story for Artists

Dr Jenny Wright

Artists have incorporated and used innovations in science and technology in their work for centuries. In the 15th century, artists such as Da Vinci and Dűrer combined their many interests and talents with natural philosopher compatriots in the fields of optics, biology, physics, mathematics, and anatomy to produce remarkable works that reveal emerging humanist ideals.

During the 19th century Impressionist artists took advantage of developments in the chemical industry and the production of oil paint that could be stored in tubes and used outside the studio to make paintings that astonished the established art world and continue to delight the public today. The imagination and freshness of creative genius resonate with humanity and endure as artists in all fields visual and nonvisual who take advantage of technological and scientific advances to influence and create new work.

However, technological changes and advances have been seen at times of undermining creativity and fine art skills. Charles Baudelaire, in his *Salon of 1859*, dismissed photography as the 'refuge for bad artists'. Nevertheless artists during the 19th century used the revolutionary technology of photography to capture intimate scenes of domestic life or fleeting moments of grace and movement that models would struggle to hold for any length of time that were often a key influence on finished artworks.

Edgar Degas (1834–1917) produced many sketches and pastel drawings of young women rehearsing and performing ballet but was rather reluctant to acknowledge his use of black and white photographs such as Danseuse (*Fig. 1*). Degas' photograph reveals some of the chiaroscuro effects that he used in many of his finished paintings and pastel drawings.[1]

By using photographs as an ancillary record of ballet dancers, Degas was able to capture transient, incidental positions that would inform his finished paintings and sculptures. The use of photography in his work is also evidenced by strong contre-jour seen in many of his paintings. The camera having a 'mechanical eye', can only adjust for one density of light or exposure, while the human eye can rapidly adjust for variations in light. Degas' camera would have a set exposure so he would have to select an interior or exterior light source. In (*Fig 2)* it would appear that the exterior light source has been chosen resulting in the loss of detail of the dancers' faces, while in (*Fig. 1)* he would have used several lamps to get areas of light on the body to record the softness of flesh on the dancer's shoulders and details of clothing.

Fig. 1 (left) Degas Danseuse, c. 1895 (Photograph)

Fig. 2 (right) Degas' Danseuses dans une Salle d'Exercise (Trois Danseuses), 1873 (Oil Paint on Canvas

Pierre Bonnard (1867-1947) also used photography as part of preparation for the production of some of his paintings, Although he never took himself seriously as a photographer, in the few images that he produced, he was able

to transfer his skills and knowledge as a painter to produce sophisticated photographs. In this he was ahead of many photographers of his time in terms of structure and composition. Bonnard was able to transform his black and white photographic still images of his wife in a variety of poses and bathing into a series of luxuriant and lush paintings, using rich colour and texture.[2]

Fig. 3 Bonnards' La Grande Baignoire, c. 1973 (Oil Paint on Canvas)

Subtle evidence of camera work may be seen in the painting of his wife in a bath (*Fig. 3*), where distortions at the edge of the bath are more commonly seen in close up photographs.

Walter Sickert (1860-1942) was much more open about his use of photography in his work. His paintings of prostitutes and theatrical scenes from the late 19th century, like Degas' dancers, have strong contre-jour effects, with fine details blurred and interior scenes darkened (*Fig. 4*).

His interest in rapidly changing contemporary media and urban life can also be appreciated in the themes and techniques in his work.[3] Photography and, subsequently, cinema were developed during his lifetime, and this is reflected in his choice of subjects appealing to a mass audience and a record of working-class domestic life.[4]

For his later works, Sickert stopped making drawings, and instead painted from photographs of famous events. For example, he used the newspaper image of a rather uneasy-looking Edward VIII arriving for a church service (fig. 5)[5]. The colours in Sickert's paintings were based on his memory or imagination, as the original published image was monochrome. He relied on developing colour and shade from the tonal contrasts in the photograph.

Fig. 5 (left) H M King Edward VIII, 1936 (Oil Paint on Canvas)

Fig. 4 (right) Sickert's The Music Hall, c. 1888 (Oil Paint on Canvas)

Sickert also used snapshots usually taken by his third wife, fellow artist and founder member of The London Group, Thérèse Lessore (1884-1945).

He would square up and enlarge the photographs, then transfer the images to canvas.. His finished paintings included plainly visible pencil grids. He subsequently taught this technique to many students in East London and was influential in the work of Elwin Hawthorne (1905-1954) and other artists from the Bow area in East London.[6]

Into the 21st century, artists now face the challenges and possibilities of working with technological advances in the use of AI. Data-driven machine learning is rapidly expanding and becoming more important in research and practical activities. Medicine, pharmaceutical production, agriculture, conservation, utilities, finance, manufacturing, and numerous other areas are rapidly expanding with the aid of AI. Although for the most part, we humans appear to benefit from this evolving technology, questions arise regarding human versus AI creativity and the benevolence of digital interfaces. In the production of fine artworks, issues of authenticity and ownership are problematic, While AI-generated images have the appeal of something novel or impressively amusing, and for some highly aesthetically pleasing, there is some doubt as to whether work produced as a result of data-driven machine learning can be considered original artwork.[7]

Over centuries, artists have collected and been inspired by human generated images. They have learned and adapted techniques often undergoing apprenticeships over many years, to acquire knowledge from great masters. Their work has been made with a physical, emotional.

and transcendent relationship with the material, corporeal world that is inaccessible for AI. While AI can combine and manipulate digital data from around the world in seconds, humans accumulate information from physical interaction with their senses and find as a result a deeper understanding of humanity and the world around them.

Artists like Picasso certainly were schooled in classical techniques and went on to 'break the rules' of academic painting by distorting three-dimensional perspective, idealised proportionand developing work using motifs from non-western cultures. His works encompass a range of human physical and emotional experiences that AI is not able to access through a physical or emotional relationship with the world. Picasso's all -too-human experience of erotic love are revealed in the many works that he made of his lovers, anger and anguish are seen in paintings of Guernica, ageing and dying in portraits from his 'blue period'. Images corroborate and substantiate physical and emotional involvement with the human world.

AI certainly has access to an entire world of visual resources previously unavailable to the human artist. Digital images originally created and posted by human beings now accessed by automata and subsequently combined and manipulated follow pre-set rules and are not guided by an independent creative force or emotional compulsion. Human artists certainly have used and manipulated images to tell a story or reveal an idea and will doubtless move work forward as technology advances.[8,9]

> *Where the telescope ends, the microscope begins, and which has the wider vision? You may choose. A patch of mould is a galaxy or blossom; a nebula is an antheap of stars. There is the same affinity, if still more inconceivable, between the things of the mind and the material things. Elements and principles are intermingled; they combine and marry, and each increases and completes the other, so that the material world and the moral world both are finally manifest. Victor Hugo , Les Misérables*

Notes

1. Stánska, Z. (2024) Rare Photographs by Edgar Degas Available at https://www.dailyartmagazine.com/this-photographs-taken-by-edgar-degas-will-sweep-you-off-your-feet/ (Accessed: August 2024).

2. DanteBea (2013) Marthe Bonnard sous l'objectif de Pierre Bonnard (1867-1947) available at: https://dantebea.com/2013/11/07/marthe-bonnard-sous-lobjectif-de-pierre-bonnard-1867-1947/ (Accessed: August 2024).

3. Holt Y,(2012) 'The Camden Town Group: Then and Now', in Helena Bonett, Ysanne Holt Jennifer Mundy (eds.), The Camden Town Group in Context, Tate Research Publication https://www.tate.org.uk/art/research-publications/camden town-group/ysanne-holt-the-camden-town-group-then-and-now-r1105679 (Accessed August 2024)

4. Helena Bonett, Ysanne Holt and Jennifer Mundy (2012) 'Introducing The Camden Town Group in Context', in Helena Bonett, Ysanne Holt, Jennifer Mundy (eds.), The Camden Town Group in Context, Tate Research Publication

https://www.tate.org.uk/art/research-publications/camden-town-group/introducing the-camden-town-group-in-context-r1106438 (Accessed: August 2024)

5. Kent, S. (2022) Walter Sickert, Tate Britain review - all the world's a stage –The artist as voyeur https://theartsdesk.com/visual-arts/walter-sickert-tate-britain review-all-worlds-stage (Accessed: August 2024)

6. Buckman, D. (2014)The East London Group & Photography Available at

https://spitalfieldslife.com/2014/05/11/the-east-london-group-photography/ (Accessed: August 2024)

7. SW Chambers AI Agents are not Artists (2022) AI Lacks the Innate Psychic Structure and Experience to Create Art. Available at: https://towardsdatascience.com/artificial intelligence-agents-are-not-artists-9743d5dba2d0 (Accessed: August 2024)

8. https://www.plymouth.ac.uk/discover/is-ai-generated-art-actually-art (Accessed: August 2024)

9. Kinaesthesia: Miguel Ripoll on Art in the AI. https://www.riseart.com/artist/131477/ miguel-ripoll?

Image credit: Wikimedia Commonss

Acknowledgements

This article first appeared on the JISC website: https://nationalcentreforai.jiscinvolve.org/wp/2024/08/21/embracing-generative-ai-in-fashion-education/

Computing Collaborations

Communities of Practice, in Practice

Jennifer Lovelock

Image Credit: Ettiene Wenger

As educators, creating, being, and growing within a community of practice is everything we do. We come together as one to 'engage in a process of collective learning in a shared domain', be it through team INSET days, networking events, or even chatting with our colleagues in the staff room about whatever new outrageous white paper the government has come out with this time (*Wenger-Trayner & Wenger-Trayner, 2015*). We connect, we learn, we grow.

But What Does a 'Community of Practice' Really Look Like?

Etienne and Beverly Wenger-Trayner use a fitting analogy to explain this: when we think of a community, we may think of a neighbourhood community or a group of friends. However, while these groups may share commonalities, they are not necessarily a community of practice (*Wenger-Trayner & Wenger-Trayner, 2015).*

So What's the Difference?

This can be considered in relation to three key areas: domain, community, and practice.

Firstly, a shared domain must exist between members of an all-important 'community'; this may be a shared interest or occupation, for example. These members must actively engage in shared activities and joint discussions, building relationships and learning from each other. To join a knitting club, for example, is not a community of practice unless expertise on the best knitting needles or a flash new wool is shared.

Finally, the Practice;

'Members of a community of practice are practitioners.' (*Wenger-Trayner & Wenger-Trayner, 2015*).

There is a requirement for an element of action; resources may be shared, tools may be recommended, solutions to recurring problems may be offered, and something must be done with this content. For instance, it might inspire change or upskill your team.

Sometimes, a Community of practice is even accidental. Sitting with your colleagues at lunch or chatting in the corridors about current issues, upcoming school events, or how you adapt your teaching for certain learners – all involve actively sharing expertise.

In Short, If YouAre:

- In a shared area of interest/occupation
- actively engaging in shared activities or discussions
- … and Proactively using this to better your practice.
- you are in a Community of Practice!

But how does this work when you are not in the same room as your community?

The internet is a weird and wonderful thing, expansive and unregulated, a platform for connecting with people all over the world and finding out anything you need to know, for good or bad reason.

If used correctly, the internet can be a portal to transforming your teaching.

The power of the internet to connect us with professionals across the globe brings new opportunities; an influencer we work with, Simon Hunt (who you may know as MrHuntfromthefront), describes this as 'bringing the world into your classroom'. He has single handedly used the internet to introduce his students to poets and illustrators via video call, show his students' work to professionals as big as David Walliams, and even connect with children in Ukraine!

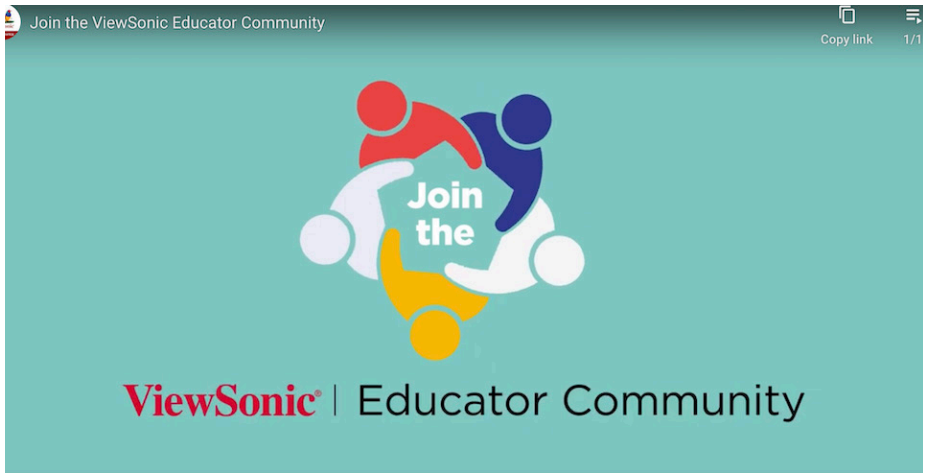
The internet really has the possibility to bring learning to life for your students and revolutionise your teaching practice.

I should probably have begun this article with an introduction; we are halfway through now, but better late than never! I am Jenny, I work for a company called ViewSonic. If you have not heard of us, we're a big player in edtech, global in fact. We make interactive boards, monitors, projectors, all sorts! But most importantly, we have our very own Community of practice. And I am the one and only UK Community Manager. (It is almost like the topic of this article was chosen on purpose...).

The Community is intentionally designed to be a space of growth. I create continuous lesson content to save teachers some planning time, but we also create CPD resources, like free PD, teacher wellbeing content, and even content specifically for ECTs. However, all of this wonderful stuff wouldn't be possible without our lovely members. Being able to connect with teachers across the country (and the world) enables a real community of practice. I am passionate about teaching and learning, and with the pressure on teachers at an all-time high, the ability to lean on others for support is invaluable.

I was actually a teacher for seven years before coming into this role, and the development of mine and my colleague's practice was a passion of mine. In my final teaching role, I worked as a lead practitioner in a school for young people who have experienced trauma. I realised quite quickly that CPD related to 'how do you teach phonics' was much less important than 'trauma-informed practice' and 'allowing learners with SEND to access learning'.

I am going to use everyone's favourite, Maslow's hierarchy, here. We must start learning according to our students' basic needs. Safety, health, and a sense of belonging are right at the bottom, not just for our students but for us as educators, too (You cannot pour from an empty cup, right?).



So, the ViewSonic educator community is different. Yes, you will find a wealth of learning resources here, but you will also find a safe space for learning, growing, asking 'stupid' questions, and limitless growth. You may only get a 30-minute lunch break to chat with your colleagues, but the community is there 24/7. Use it for teacher wellness resources, articles for ECTs, free guides, and learning resources. But mostly, we call it a community because it is just that;

'Life in association with others' (*Wenger-Trayner & Wenger-Trayner, 2015*).

I can wholeheartedly see the benefits of connecting in person with your colleagues, but, as teachers, there are not enough hours in the day. So, online communities of practice, whichever platform you use, come to save the day. They are limitless, they are expansive, and they are broad In some corner of the internet somewhere you will find a community of practice for just about everything, specific communities set up for TESOL, for SEND, for science teachers, for just about everything and anything. So, you can connect with professionals you may not have been able to interact with in person. You may be the only English teacher in your school, which can be lonely, but these online communities can change that.

So, if you take one thing from this article, let it be this: those that use online communities of practice are trailblazers. They can transform their practice, create a global network of talented teachers and a platform for support.

Find your community now!

Wenger-Trayner, E. and Wenger-Trayner, B. (2015) Introduction to communities of Practice – Wenger Trayner, Introduction to communities of practice. Available at: https://www.wenger-trayner.com/introduction-to-communities-of-practice/ (Accessed: 27 August 2024).

Exploring Educators' Perceptions on Using XR Tools in Teaching and Learning

Devon Rossetti and Simon Chapman

The evolution of technology has created a dynamic shift in educational methods, and immersive technologies such as Extended Reality (XR) are at the forefront of this change. This blog explores findings from research concerning educators' perceptions of XR tools within teaching and learning, particularly within higher education (HE). This study sheds light on the current state of XR adoption in the subject area of education at the University of Northampton, exploring both the potential and challenges these technologies present. While the study acknowledges a growing interest in XR within educational circles, there is limited research specifically focused on its use in primary education. However, interest is developing, as shown by several recent studies (*Akcayir & Akcayir, 2017; Pirker & Dengel, 2021*).

Defining XR

XR encompasses a range of immersive technologies that blend the physical and virtual worlds. It includes virtual reality (VR), where users experience synthetic digital environments through interactive, computer-based applications (Inoue, 2012), and augmented reality (AR), where real and virtual worlds are combined (*Sirakaya and Sirakaya, 2018*). The boundaries of XR are constantly evolving, and understanding these technologies is pivotal for educators looking to incorporate them into their teaching practices.

The Importance of XR in Education

According to Widman (2019), it is an educator's duty to develop the use and understanding of new technologies; in England, this is underpinned by the primary computing national curriculum (*DfE, 2013*) that states children must learn to use new or unfamiliar technologies – This would therefore, include XR tools.

A key argument in favour of XR adoption is its potential to foster active learning and enhance emotional skills (*Brade et al., 2017*). By immersing students in virtual environments, XR can make learning more accessible, particularly in areas where real-world experiences may be difficult to replicate (*Marchant et al., 2014).* For example, students can virtually explore historical events, such as 'visiting' the Great Wall of China or scientific phenomena including observing the atomic structure of states of matter. Also, scholars also note XR has the potential to increase student engagement and foster intrinsic motivation (*Freina and Ott, 2015; Kavanagh et al., 2017*).

Despite its benefits, XR is not without its challenges. One of the primary barriers to widespread adoption is the cost of XR equipment and the specialised training required to use it effectively (*Kavanagh et al., 2017*). Additionally, there

are emotional and physical considerations. For instance, certain XR experiences, such as simulations of traumatic events such as tsunamis or being in a World War Two trench, could potentially evoke stress or trauma in participants, as well as concerns around motion sickness and the unrealistic portrayal of certain experiences (*Pirker and Dengel, 2021*). Moreover, educators need to be trained not only in using the tools but also in understanding their pedagogical value (*Mishra and Koehler, 2006*).

Research Aims and Methodology

The study aimed to explore educators' perceptions of XR tools as teaching aids and examine the factors influencing their adoption. The case study methodology was grounded in an interpretivist approach and involved pre- and post-trial questionnaires completed by a small sample of educators (n=6) within the subject area of education at the university. Participants were asked to choose a resource using the Seymour and Lehrn platform, integrate this within a lecture, and then reflect on its use.

Pre-Trial Findings

Pre-trial, participants displayed a range of understanding and confidence levels regarding XR tool use. Four participants had limited definitions of XR and minimal exposure to its use in their personal or professional lives, whereas two participants were familiar with terms such as 'AR' and 'VR' and could provide examples of how they had encountered these technologies in gaming and shopping.

Confidence levels were similarly varied. The two participants with prior understanding of XR felt more confident using the tools, whilst the remaining participants (n=4) felt somewhat or not confident at all. Interestingly, this lack of confidence was often linked to limited personal experience, suggesting that familiarity with XR tools is key to their successful adoption.

Post-Trial Findings

The trial revealed significant growth in both confidence and willingness to integrate XR tools into teaching. Educators used XR in various contexts, including exploring locational knowledge in geography. The participants unanimously agreed they would use XR tools in the future, and all reported increased confidence in their ability to integrate the technology into their teaching.

A key finding was XR's ability to make abstract concepts more tangible. Participants noted that students could interact with environments and objects that would otherwise be inaccessible or difficult to visualise, such as historical artefacts or scientific phenomena such as viewing planets in The solar system.

However, participants also emphasised that while XR tools offer significant advantages, they cannot fully replace real-world experiences; concrete resources and physical visits to historical sites for example still have unique educational value that virtual experiences cannot entirely replicate.

Recommendations

The study generated several recommendations. Training and continuing professional development (CPD) for educators were deemed essential. Educators need more exposure to the full range of XR tools available outside of Seymour and Lehrn, which was used in the trial, as well as guidance on how to use them effectively in the classroom. Knowledge-sharing between subject areas and faculties could help foster a deeper understanding of XR's potential.

Further research is also needed, particularly within primary education, to assess how XR can be tailored to other subject areas and how best to overcome the barriers currently limiting its use. The researchers recognise the importance of further study into the area; expanding the sample size would provide a more comprehensive picture of XR's effectiveness.

Conclusion

XR technologies hold immense promise for enhancing teaching and learning pedagogy. By offering immersive, engaging, and interactive learning experiences, these tools have the potential to transform how students learn and how educators teach. However, to fully harness the power of XR, there needs to be a concerted effort to train educators, reduce barriers to adoption, and continue researching the most effective ways to integrate XR tools.

References

Akcayir, M and Akcayir, G. (2017) Advantages and challenges associated with augmented reality for education: a systematic review of the literature, Educational Research Review, 20, pp.1-11.

Brade, J., Lorenz, M., Busch, M., Hammer, N., Tscheligi, M. and Klimant, P. (2017) Being there again – presence in real and virtual environments and its relation to usability and user experience using a mobile navigation task, International Journal of Human-Computer Studies, 101, pp.76-87.

Department for Education (2013) National curriculum in England: primary curriculum, GOV.UK [online]. Available at: https://www.gov.uk/government/publications/national-curriculum-in-england-primary-curriculum

Freina L. and Ott, M. (2015) A literature review on immersive virtual reality in education: State of the art and perspectives, The International Scientific Conference E-Learning and Software for Education, 1(133), pp.1000–1007.

Inoue, Y. (2012) Virtual reality learning environments. In: Seel, N. (ed) Encyclopaedia of the Sciences of Learning. Springer, Boston.

Kavanagh, S., Luxton-Reilly, A. Wuensche, B. and Plimmer, B. (2017) A systematic review of virtual reality in education, Themes in Science and Technology Education.10(2), pp. 85–119.

Merchant, Z., Goetz, E., Keeney-Kennicutt, W. Kwok, O., and Cifuentes, L. (2014) The learner characteristics, features of desktop 3D virtual reality environments, and college students' science learning. Journal of Educational Technology. 45(6), pp.1083-1095.

Mishra, P. and Koehler, M.J. (2006) Technological pedagogical content knowledge: a framework for teacher knowledge, Teachers College Record, 108(6), pp.1017–1054.

Rossetti, D., and Chapman, S. (2024) Exploring educators' perceptions on using XR tools within teaching and learning, BERA and WERA Annual Conference; Manchester, United Kingdom.

Sirakaya, M. and Sirakaya, D. (2018) Trends in educational AR studies: a systematic review. Malaysian Online Journal of Educational Technology, 6(2), pp.60–74.

Widman, S. (2019) Technology, the best or worst thing for education. TED: Ideas worth spreading [online], Available at: https://www.ted.com/talks/scott_widman_technology_the_best_or_worst_thing_for_education (Accessed: 10 September 2024).

Insights from PGCE Trainees' EdTech and Computing Classroom action Research

Elizabeth Hidson

TPEA Conference 2024 Venue

Introduction

I was delighted to present recently at the Technology, Pedagogy and Education Association's 36th annual conference in Manchester. This year's theme was *Facing the future: Are we ready for change?* As a teacher educator, working with PGCE and SCITT trainees nationally and internationally, I wanted to talk about the trainees that I work with right now and the kind of issues that they, as the newest entrants to the teaching profession, were grappling with in terms of educational technology (edtech) and computing.

There is currently no central policy in England on how teachers should incorporate technology into teaching, although the Initial Teacher Training and Early Career Framework (DfE, 2024) does mention on p.5 that:

> *the technology available for facilitating great teaching and supporting pupils to succeed is constantly evolving, so the framework does not refer to specific technological innovations. Teachers, however, need to be conversant throughout their careers with technological developments that evidence suggests can improve pupil outcomes. Providers of ITT and ECT training are encouraged to consider how their training materials can support trainees and ECTs in the judicious use of technology, informed by evidence, both in helping pupils to progress and in enabling and enhancing their own working practices. (DfE, 2024, p. 5)*

As a teacher educator, I take this broad encouragement as a remit to teach trainees to reflect on edtech and its potential uses in supporting pedagogical aims for all students, including those with SENDs. While some trainees that I work with will be computing specialists, the majority will not, and so, in addition to preparing them for the types of hardware and software they might encounter across a range of schools, we also look to the wider debates.

During their training, our trainees do a piece of action research, selecting a topic that they consider relevant to their own teaching. Local insights and context are vital, and we ask them to think about what bothers them in their classroom and what steps they can take to explore it further. They select a research question, use an action research model to plan their cycles, use emerging classroom data, and reflect systematically on the process, taking the Institute for Effective Education evaluation questions as their prompt: "What impact does [what practice] delivered over [over how long] have on [what outcome?] for [whom?]" (Shaw, 2020, p. 7), with the supplemental, all-important 'And how do you know?'. It is this corpus of action research projects that I interrogated as an initial piece of research to find out what edtech or computing-related topics our trainees were interested in, using my own research question:

What edtech/computing topics do PGCE trainees choose to explore for classroom-focused action research projects?

PGCE Trainees' Action Research Projects

Of 348 assignments submitted during the second semester of the 2023/2024 academic year to one iteration of our action research module, 325 were not specific to the computing or edtech research question (93.4%). That left me with 23 that I considered relevant to the question (6.6%). I grouped them into seven key topics:

a. Using technology for assessment
b. Technology for managing learning behaviour
c. Teaching coding in primary schools
d. Using technology for engagement
e. Gamification across the curriculum
f. Addressing gender imbalance in computing
g. Integrating video technology in physical education

Image source: Microsoft Designer's free AI image generator

Readers with an interest in specific examples of each of these topics can access the slides I used at the conference (link in the reference section). With a main theme of the conference being the use of generative AI, I used the opportunity to generate images to illustrate the seven examples of the projects that I selected. The example below was generated to illustrate the research question, "How does the integration of video technology in badminton instruction impact teaching effectiveness and student learning outcomes?".

Common Themes and Concerns

As well as these seven specific examples of trainees' projects, I found it helpful to try to group them into common themes. Where edtech is concerned, it is often a case of balancing technology use with pedagogical purpose. Do the trainees think enough about the affordances of the technology and what it can do for learning? Can we move them towards selecting when to incorporate technology so that it is purposeful and key to learning?

As part of that, trainees are often concerned about addressing potential distractions and off-task behaviour where technology is concerned. They worry that their students will learn less effectively because tablets and other devices offer the allure of accessing material other than that needed for the lesson. Given that trainees are often most concerned about behaviour as they begin their teaching career, they may not feel comfortable managing devices as well as students.

Trainees do recognise the need to ensure equitable access and support for all students – that comes through when they are interested in gender imbalances or learning differences and how these can be impacted or improved by more judicious planning for learning with technology.

Trainees want technology to excite their students–they want to be able to develop intrinsic motivation alongside technological tools so that learning is enhanced. They are happy to incorporate different ways of using technology to support their students' growth as learners.

These are all useful ideas, but what is also needed are ways to help trainees to develop these skills for themselves. The local context is particularly relevant here as there is no 'one size fits all' in terms of technology uptake in schools, hence the need for developing the overall digital competence of the trainees.

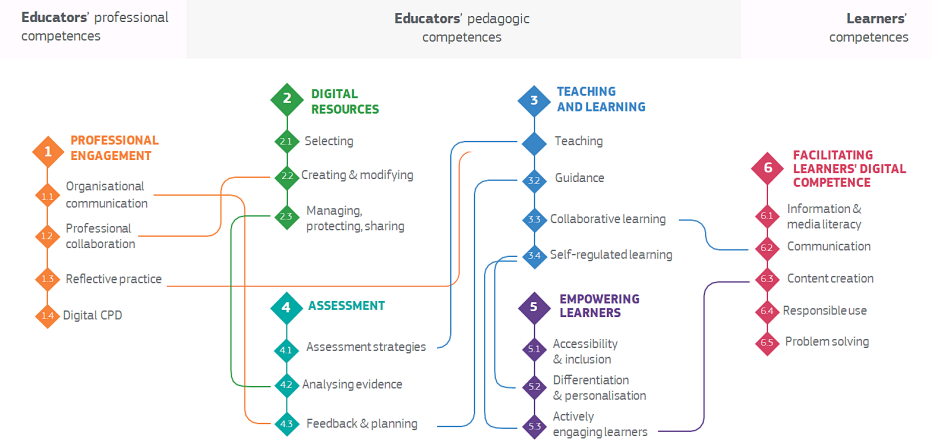


Image source:DigCompEdu https://joint-research-centre.ec.europa.eu/digcompedu_en

If I were to make a wider call to action in terms of the things we need to consider in digital education policy in England, especially under a new government, it would fall into these categories. Make use of expertise to inform the digital agenda–we have a lot of good knowledge and expertise in the community that could be drawn on for future policy. Provide clear guidance around digital skills and qualifications–this has become something of a battlefield in the last decade. Ten years on from the 'new' computing programmes of study, we have learnt a lot about what needs to be done. Part of that is the need for a review the place of digital skills in the programmes of study, as well as clarification and articulation about the place of digital technologies in teacher competencies. We need to embed digital professional development for teachers right from initial teacher training onwards so that teachers can respond to changes in technology more effectively.

In the meantime, we can continue to teach about the importance of ongoing research and adaptation as part of teacher education so that teachers can embrace edtech based on a critical evaluation of how it can support learning.

Further Resources

A PDF version of the PowerPoint slides from the TPEA conference can be accessed here https://sure.sunderland.ac.uk/id/eprint/17850/

References

Department for Education (DfE) (2024). Initial Teacher Training and Early Career Framework (ITTECF). Available online at:

https://assets.publishing.service.gov.uk/media/661d24ac08c3be25cfbd3e61/Initial_Teacher_Training_and_Early_Career_Framework.pdf

Digital Competence Framework for Educators (DigCompEdu) available at:

https://joint-research-centre.ec.europa.eu/digcompedu_en

Shaw, A. (2020). Evaluation Handbook. Institute for Effective Education (IEE): York.

Advancing Computing in the Primary School

Lawrence Williams and Beth Mead

Computing in the primary school has now been around for over ten years, and so we suggest here three ways of advancing key skills and concepts further. All three classroom projects have been tried and tested in schools, with impressive student outcomes.

Year 1 Term 1: A Bilingual Story in English and Hindi

The first project, *Literacy from Scratch*, was initially developed for, and with, primary-level PGCE students at Brunel University London, and a web site was built to share both their post-graduate coursework and the work of their primary school pupils when they were on local school placements (Google *Literacy from Scratch* for further details). Their work was generally focussed on introducing Scratch to years 5 or 6. We found, however, that pupils as young as years 1 and 2 were equally capable of producing a short story in three scenes, with backgrounds, dialogue, and voice-over effects from characters that they had drawn for themselves. Some voice-overs were in the pupils' first language.

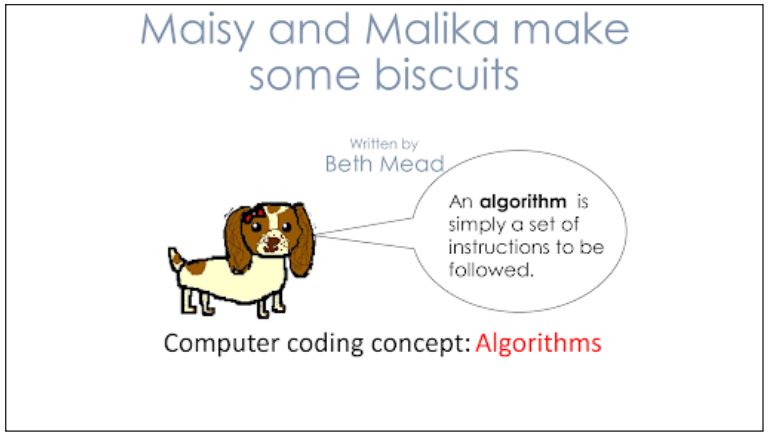
My early memory of working with some of these delightful year 1 first term pupils was of entering the computer suite and watching them try to swipe the screen with their fingers, as they would on a tablet or phone! We had first to explain what a mouse was and how to use it. Once fired up, every pupil in year 1 and in year 2 successfully completed the story-telling task set. Our contention, therefore, is that schools currently working with Scratch in years 5 and 6 should seriously consider relocating this work to years 1 or 2. This is easily possible, and would represent realistic progression in the demands made on pupils to learn Scratch at an earlier age than is currently the case in many schools.

The second step in advancing computing at primary level is to introduce some of the basic concepts:

- Algorithmic thinking (following a set of rules, sequencing skills)
- Debugging (detecting and correcting errors)
- Decomposition (breaking a complex problem down into simpler parts)
- Logical thinking (reasoning skills)
- Generalisation (recognising patterns and using them to find solutions)
- Abstraction (sorting relevant information from unnecessary detail)

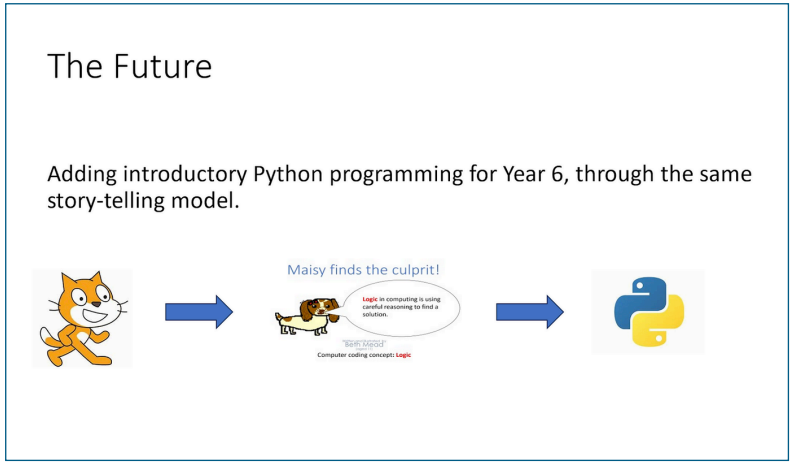
While this terminology sounds daunting, it is easily taught through storytelling. Accordingly, we set out to create a series of short story books, each exemplifying a single computing concept. These illustrated stories are all available for download from the *Literacy from Scratch* web site, and each concludes with a historical note page.

Here is an example title page:



Each of the six stories for children, when shown to your class from the IWB and followed by a brief classroom discussion, could provide a useful starter activity for a computing lesson. Or the pupils might write their own stories.

The third, and most demanding development, is the introduction of Python, also for storytelling, into year 5 or 6.



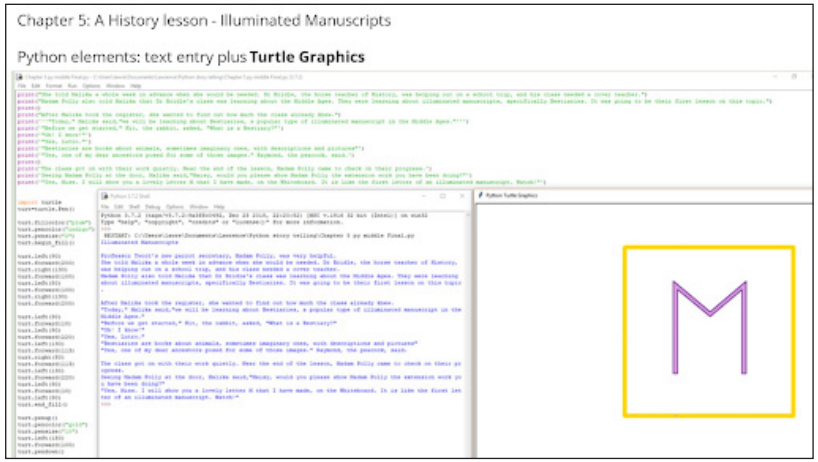
Python Strings

This is not as difficult as it may sound, using what are called Python strings.

How to start:

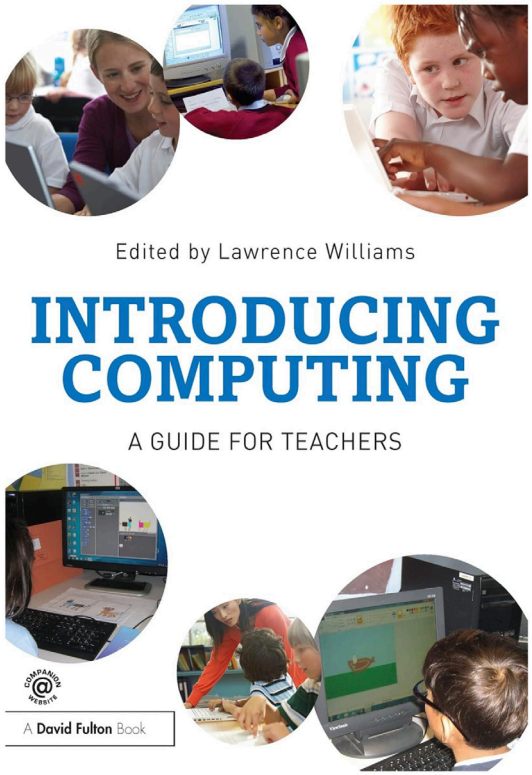
- Load a free copy of Python.
- Load IDLE (Called a Compiler)
- Type the word PRINT. This will appear as pink writing on your screen.
- Type an opening bracket: (This will now appear in black writing.
- Type inverted commas: " This will now appear in green writing.
- Type the title of your story. This will continue in green writing.
- Type a closing bracket:) This will revert to black writing.
- Press Return.
- Now on a new line, type PRINT (). This will print everything between the brackets. i.e. a blank line.
- Now type PRINT ("One day, I wrote a story using Python strings")
- Save and name the file, on the top Command line. This is now a Python computer program!
- Run.
- Your story will appear on the screen as a printout (a computer output). This will now be in blue writing.

Here is a completed story from the *Literacy from Python* web site. Commands, top left, are in pink. The story is in green. The printed story is in blue, and the added picture is on the right-hand side. The grey text next to the blue story is achieved by adding in a simple Turtle Graphics package, and the drawing of a capital letter M appears on the right-hand side:



All of this is explained in detail on the *Literacy from Python* website, which can be accessed from the *Literacy from Scratch* website. All of the work in the above three projects was carried out by pupils from year 1 to 6.

A much fuller account of the Literacy from Scratch project can be found in "*Introducing Computing: a guide for teachers", Ed. L. Williams, Routledge, 2014*. A fuller account of the Literacy from Python project, including its pedagogy, with teachers' notes, can be found in "*Teaching and learning with technologies in the primary school", Ed. Marilyn Leask, Sarah Younie, Routledge, 2024.*



Inclusion

Advancing Social Media Literacy

Caroline Haythornthwaite

Image Credit: Daria Nepriakhina, Unsplash

What does it take to be literate on social media? What kinds of knowledge, skills, and competencies are needed for literate social media practice? Colleagues and I have been looking at anti-social behaviour online, and I found myself particularly interested in the content moderation practices on social media platforms. As I delved into the details, I became aware of how much is going on behind the scenes and how this knowledge is largely overlooked in discussions of digital literacy. This inspired me to look further at what constitutes digital literacy and what might be added for social media literacy.

Why Does Social Media Literacy Matter?

Social media reaches billions of people, supporting work, learning, and social connectivity–three billion monthly active users for Facebook alone in 2024, contributing billions of daily posts. By 'social media' I mean the online social network platforms that support social interaction through conversational interfaces such as Facebook, Instagram, Twitter, TikTok, Reddit, Weibo, and YouTube, Q&A and learning sites such as Quora and Stack, and newer platforms such as BlueSky and Mastadon.

Features of these social media platforms are sufficiently different from other media to indicate a need for social media literacy. Features include social and collective production of texts; openness of entry and engagement; multiple, emergent communities of practice; online community language and behaviour; platform standards; and content moderation.

Contemporary Views of Literacy

Addressing social media literacy does not mean starting from scratch. Social media literacy builds on the well-understood meaning of literacy as "the ability to read, write, speak and listen in a way that lets us communicate effectively and make sense of the world" (*National Literacy Trust, UK, 2023*). It builds on media, information, and digital literacy to include active search and evaluation of sources and resources, use of contemporary communication and information technology; the 'texts' that are read are understood to include language, images, graphics, sound, and music.

Contemporary views of literacy embrace an active role of literacy practice that particularly resonates with social media–going beyond possession of skills "to participate actively in civic society and contribute to a vibrant, informed, and engaged community" (*ALA Office for Information Technology Policy, 2012*). Literacy for social media includes the construction of communities through conversational interaction. For social media, "reading may be seen as essentially a shared activity in the sense that it deals with the evaluation of different and often conflicting versions of reality. Groups and communities read and evaluate texts collaboratively. Interpretation … is undertaken in specialised 'communities

of practice'" (*Tuominen, Savolainen & Talja, 2005, p. 337*).

Recent views also emphasise how literacy confers identity, providing the "ability, confidence and willingness to engage with language to acquire, construct and communicate meaning in all aspects of daily living" (*Alberta Education, 2023*). On social media, the presentation of self through texts, images, conversations, and community roles sustains an online identity, and continued engagement builds confidence in understanding social media literacy practice.

In the social media context, participants engage with multiple communities within a platform, and often on multiple platforms. They face a changing and emerging set of practices and cultures, with volatility in ownership directives, regulatory environments, and debate about appropriate speech online. Social media literacy requires navigating this changing landscape, acquiring "the knowledge, skills and confidence to keep up with changes in technology" (*ABC Life Literacy*).

Social media adds a world of communication and culture that sits apart from offline life. A wider view can see social media communications as situated in a world of multiliteracies necessary for confronting "the multiplicity of communications channels and increasing cultural and linguistic diversity in the world" (*The New London Group, 1996*).

Literacy Needs for Social Media

Social media comprises a continuously emergent landscape of texts, conversations, communities, and platforms. As such, pinning down literacy skills for a specific context is like trying to hit a moving target. I see the task as more about identifying areas of practice that respond to this volatile environment and actions that, in keeping with contemporary approaches to literacy, are brought into practice, including awareness, discovery, evaluation of resources, critical thinking, reflection, and contributory participation.

What follows is necessarily generic. It aims to draw attention to areas of literacy practice for social media that might not immediately seem obvious, organised around information evaluation, cultural and production knowledge skills, and a bit of a deeper dive into content moderation.

A caveat is that the rapid conversations and continuously emergent information landscape require developing a set of literacy and evaluation skills respondent to such rapid updating, a set of skills that may yet need to be fully articulated.

Information Evaluation Skills

Image Credit: Pickpik

As per media literacy, social media information evaluation skills include awareness and application of the many ways to check that information and sources are trustworthy when found on social media. As per information literacy, social media literacy skills include the ability to search and verify information found in the social media context, including verifying with outside

sources. For the social media context, we add some further considerations about information.

What information is acceptable on social media, and how is this enforced?

Platform standards are published and available on social media sites. They specify what material and behaviour is acceptable on the platform, what content violates platform standards, and what content is blocked before becoming public. For example, Facebook Community Standards for 2024 block content relating to violence and criminal behaviour (e.g., dangerous organisations, violence, and incitement), safety (e.g., adult or child exploitation, self-harm), and objectionable content (e.g., adult nudity, violent content, and hate speech).

Social media literacy begins with understanding these goal posts for behaviour. It continues with understanding the content moderation process that screens for and removes content that violates legal, platform, or community standards. Millions of posts and accounts are removed every day for violating standards, "with technology working behind the scenes to remove violating content–often before anyone sees it." (*Facebook, 2023*). Content moderation has become a nexus for controversy about social media, challenged for both control of content and lack of control of misinformation. We return to this below.

How Does Information Circulate Online?

The point about sharing on social media is to engage with others, start a conversation, and/or build a community. Literacy for social media entails understanding how information is promoted online, from post to repost, and up and down voting, how information goes viral (*Nahon & Hemsley, 2013*, *Going Viral*), and how emotions affect attention to content and interactions (*Steinert & Dennis, 2022*).

Once associations have formed, social network structures facilitate or limit the reach of information. Information from network stars, such as influencers, have greater reach through their many followers. Network cliques, such as filter bubbles and echo chambers, can limit exposure to new information. Roles emerge from repeated patterns of behaviour in these networks. Awareness of roles can help understand social network structures and, thus, information flow. Knowing about roles also helps in understanding participant behaviour – whether benign, such as lurkers, supportive, such as moderator, learner, leader, advocate, or disruptive, such as troll or cyberbully.

Less visible are the non-human actors. Fake accounts, bots, and other AI constructs can artificially enhance the spread of information, promote the influence of certain accounts, and/or suppress information by downvoting content.

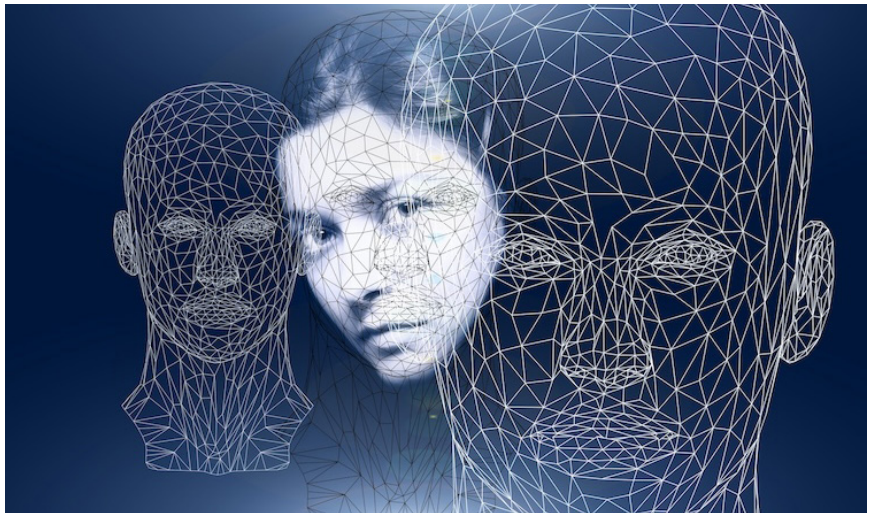


Image Credit: Pickpik

Is information Evaluation the Same for All Users?

Despite a general notion of equal access and privileges, social media is not a level information playing field. Celebrities, politicians, and special account holders are granted more leeway in what content and behaviour is allowed and what passes content moderation.

Cultural Skills

Social media as a whole retains an open internet, pioneering spirit, with an impact on free speech debates and practices on different platforms. Leadership and governance can promote or constrain such openness and its acceptance across the platform.

Social media platforms and communities create sub-cultures of their own, with expectations of behaviour, discussion practices, language, etc. Literacy skills include knowing how to join such communities, participate, and move into leadership positions. Participating appropriately and productively can include staying on topic in a forum, using appropriate language, maintaining civil discourse, and supporting or sanctioning others for their behaviour.

Online culture does and will overlap with offline life. A literate user will be aware of how online interaction differs from offline and its impact on offline life, e.g., in personal reputation or harm to others.

Production Knowledge and Skills

Literary practice entails "activities around textual production–texts and practices which taken together are recognised as typical and purposeful for a community" (*Goodfellow & Lea, 2014, Literacy in the Digital University, p. 3*).

Production knowledge begins with understanding how every post adds data to the social media record, remaining as a persistent conversation, reviewable and useable by others and by the social media platform. Each post contributes to the social construction of the platform, i.e., to reinforcement or redirection of conversational topics and norms.

But who owns the data? Social media literacy includes understanding and agreeing to the actual and potential use of personal and posted data–what Jaron Lanier calls 'data dignity' (*Lanier, 2013, Who Owns the Future*). This includes an understanding of the terms of service, the rights of ownership, the right to know what is being done with that data, the right to privacy, and the right to be forgotten.

Countering Anti-Social Behaviour

Anti-social behaviour is a deliberate or casual transgression of platform standards. Social media literacy includes awareness of the impact and outcomes of anti-social, abusive, and offensive postings and awareness of where, when, and under what circumstances offensiveness is exacerbated. Awareness of the harmful effects of transgressive behaviour and mitigation of these effects becomes part of the knowledge and practice of ethical and responsible participants.

Content Moderation

In my view, knowing about content moderation is foundational for social media literacy. Knowing the mechanics is akin to understanding publication practices, as in news media, publishing houses, and journal publications. Knowing about the way this makes social media actually usable is akin to knowing the basis of civil society; knowing about algorithms and humans in moderation is akin to understanding societal legal and social responsibility. Debate and vigilance of moderation–as seen in controversies about social media–provide civil oversight in keeping with the motivations and special circumstances of social media platforms and communities.

Content Moderation Process

Content moderation is the major means of combating anti-social behaviour and illegal use of platforms and entails automated processes, human reviewers, community moderators, and community users. Success in blocking offensive content is essential for maintaining a viable and usable social media platform.

There are three lines of defence, starting with algorithms designed to identify and remove posts that violate platform standards. Difficulties arise in identifying and filtering a constantly changing set of terms and new evasive techniques. In Q2 2042, the Meta Transparency Center reports that Facebook algorithms

and human reviewers blocked 89 to 99% in all categories, with Bullying & Harassment the lowest at 89% and Organized Hate at 95%.

Employed human reviewers are the second line of defence. These humans evaluate ambiguous content after algorithmic filtering. However, they face a difficult task and suffer from exposure to highly offensive materials. Volunteer community moderators can also suffer from exposure to offensive posts and abuse over blocking content and sanctioning users.

The community of users is the third line of defence. Literacy practice can include community monitoring, whether in a named role of moderator or by interaction with other community members. Offending materials and users can be reported to the platform, but user communities also manage transgressive behaviour internally, sanctioning users who contravene local community norms, and supporting those offended by behaviours.

Controversies

Image Credit:Wesley Fryer CC BY

Controversies about content moderation centre on the invisibility of algorithms, failure to protect users from offensive content, overreach of algorithms in identifying offending content, and a general antipathy to control of individual speech. Tensions exist between the tradition of the internet as a 'wild, open space', where free, unfettered speech is heralded as the norm, and contemporary use of social media as an everyday social, learning, and workspace.

Controversies also arise about owner control, fair and equitable treatment of participants, and use of participant data. Platforms determine their own criteria for what constitutes anti-social behaviour and misinformation and implement their own automated and human means of limiting inappropriate content. Platforms set their own terms of service and practices of data privacy, retention, sharing, and use. Oversight committees operate at the pleasure of the owner and can be disbanded at any time.

For more details on content moderation and controversies, see Haythornthwaite, 2023.

Bringing It All Together

Defining social media literacy brings together consideration of the attributes of the new technologies of social media, continuously emergent communities and practices, and carryovers from media, information, digital, and cultural literacy. With that in mind, I offer this opening definition of social media literacy.

Social media literacy builds on language, media, information,and digital and cultural literacy to address the abilities needed to engage as an informed, ethical, and responsible social media user, be conversant with social media platform options, genres, ethos, and culture, communicate appropriately using social media modes, and act as an informed reader, participant, and moderator. Social media literacy differs from media, information, and digital literacy in attention to the open, social, collective, and distributed nature of social media. Thus, social media literacy includes recognising how actors form the social networks that facilitate or constrain the dissemination of information and

communication and the ability to engage and communicate with a public social unit through a medium that reaches across multiple locations, nations, and cultures.

Acknowledgements: This article is derived from a talk on "Digital Literacy in the Age of Social Media" given in 2023 for the International Conference on E-publishing Amman, Jordan. My thanks to Dr Nashrawan Taha, University of Jordan, for initiating this work.

Further Reading

Cho, H., Canno, J., Lopex, R. & Li, W. (2022). Social media literacy: A conceptual framework. New Media and Society, 26(2), 941–960. https://doi.org/10.1177/14614448211068530

Haythornthwaite, C. (2023). Moderation, networks, and anti-social behavior online. Social Media + Society, 9(3).

https://doi.org/10.1177/20563051231196874

Hobbs, R. (2010). Digital and Media Literacy: A Plan of Action. Aspen Institute and the Knight Foundation.

https://www.aspeninstitute.org/publications/digital-media-literacy-plan-action-2/

Law, N., Woo, D., de la Torre, J. & Wong, G. (2018). A Global Framework of Reference on Digital Literacy Skills for Indicator 4.4.2, UNESCO Information Paper No. 51. Available online at: https://www.unesco.org/en/literacy/need-know

The Role of Accessibility Statements on Irish School Websites

Jamie Sullivan and Ann Marcus-Quinn

Image credit: Theo Kuechel

In today's digital education landscape, the school website plays a vital role in enabling learning and disseminating information. This article reports the findings of a study that sought to ascertain the compliance of post-primary school websites in Ireland with the Web Content Accessibility Guidelines (WCAG) 2.1, globally recognised digital accessibility standards, along with the extent of the presence of website accessibility statements mandated by EU legislation.

Introduction

Under both EU and domestic legislation (*the EU Web Accessibility Directive 2016 and Irish Disability Act 2005*), Irish public bodies, including schools, are obliged to ensure their websites meet the WCAG 2.1 accessibility checkpoints that ensure quality of access for all web users (*National Disability Authority (NDA), 2023*). Drafting a web accessibility statement allows schools to reflect on existing web content and restructure it into a more accessible format (*Marcus-Quinn and Hourigan, 2022*). In April 2022, the Irish Minister for Education responded to a parliamentary question concerning the requirement for school websites to provide web accessibility statements outlined in the web accessibility directive. The Minister confirmed that secondary school sites are considered public sector websites and are therefore obligated to comply with EU legislation, including the publication of accessibility statements. She further underscored the significance of digital accessibility, stating, "acknowledging the legal obligation for each school to furnish an Accessibility Statement on their website, the Department of Education stands ready to facilitate the development of such statements, thereby enhancing the online experience for all users" (*Houses of the Oireachtas, 2022*). The (NDA) is charged with monitoring the implementation of the EU Web Accessibility Directive and publishes an annual report detailing digital accessibility compliance in Ireland (*National Disability Authority, 2023*). While its report assesses a broad range of sites, crucially, it does not investigate a significant segment of Ireland's digital education landscape–post-primary school websites.

The EU Web Accessibility Directive (EU) 2016/2102 (*European Commission, 2016*) dictates that websites and mobile applications must be accessible to individuals with disabilities. In Ireland, the (NDA) ensures adherence to these guidelines. A 2023 NDA report assessed the accessibility of websites in the public sector, including those related to education, such as the Disability Access Route to Education (DARE) and Higher Education Authority (HEA) sites. It found 61 issues on the DARE site (73% compliance) and 72 issues on the HEA site (76% compliance) based on WCAG 2.1 criteria, indicating a need to improve digital accessibility in the education sector. Furthermore, it was noted that 85% of websites and all mobile applications assessed did not feature required accessibility statements, failing to meet the EU directive. Such disparities highlight inconsistencies and further illustrate the need for enhanced compliance with accessibility standards by public bodies.

The Department of Education and Sciences' Digital Strategy for Schools to 2027 (*Department of Education, 2022*) mandates that school websites and

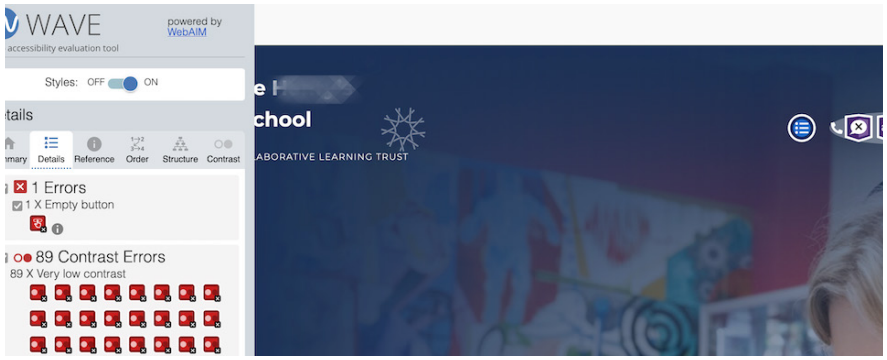
mobile apps comply with EU Accessibility Regulations (2020), the Disability Act 2005, and the Equal Status Acts 2000 and 2004. In line with the EU Web Accessibility Directive and the EU Digital Education Action Plan (DEAP) for 2021-2027 (*NDA 2023*), the strategy highlights the importance of accessibility for all in education, underscoring that schools' legal obligation to ensure digital inclusion through sufficient planning. It is noteworthy that the strategy document does not explicitly discuss accessibility statements and that while the document clearly seeks to improve learning experiences and policy approaches, it does not present any clear, practical steps that may be implemented to foster inclusion in Irish education.

This study used automated accessibility checkers to assess the accessibility of the home pages of secondary school websites in Ireland. Both the WAVE and Siteimprove tools were employed to conduct a content analysis, later supplemented by manual inspections. Subsequently, Microsoft Excel was used to delve into the data, uncover patterns, and gain insights. The quantitative analysis systematically examined metrics from WAVE and Siteimprove, including errors, contrast errors, alerts, structural features, and accessible rich internet applications (ARIA) issues. Statistical methods highlighted similarities and differences across these categories regarding severity distribution and conformance levels (A, AA, AAA). This combination of tools ensured that a thorough evaluation was achieved by combining the strengths of automated assessments with Excel's analytical capabilities.

The sample comprised the home pages of twenty post-primary secondary schools, reflecting a broad spectrum of Ireland's socio-economic makeup, from the most deprived to the wealthiest areas, as determined by the Pobal HP Deprivation Index (*Pobal, 2022*). Schools were selected to ensure a suitable mix of urban and rural schools and a wide geographic spread. Furthermore, a combination of private (fee-paying), public/community schools, and those with Delivering Equality of Opportunity in Schools (DEIS) status (schools with enrolment from disadvantaged areas) was chosen, as outlined by the Department of Education (2020). This strategy aimed to provide insight into web accessibility in Ireland's post-primary education sector across Irish society.

Two automated tools were employed to minimise the limitations of relying solely on one tool, a practice that previous studies have found to reduce accessibility errors (*Alsaeedi, 2020; Parvin et al., 2021*). The WAVE web accessibility evaluation tool was chosen due to its effectiveness in assessing compliance against the WCAG 2.1. checkpoints (*WebAim, 2023*). WAVE utilises icons to classify information. Red icons signify accessibility issues that necessitate attention; green icons show areas where accessibility can be improved, and other icons/alerts point out elements that require review. The WAVE tool provides an overview across six categories: errors, contrast errors, alerts, features, structural features, and (ARIAs). However, as also necessitated by WAVE, manual assessment is nonetheless required to ascertain whether the flagged concerns indeed constitute accessibility issues or not (*Kantardzhiev, 2022*). Comparing datasets from WAVE and Siteimprove is easily facilitated, as both check for adherence to WCAG standards and pinpoint issues across similar categories. This comparability further facilitated a uniform and systematic evaluation. These displays were supplemented by data collection sheets using Microsoft Excel, which was used to record the relevant manually verified data (presence or absence of an accessibility statement). Following data collection, Microsoft Excel was employed to analyse the data to obtain further insight. Quantitative analysis carefully examined results from WAVE and Siteimprove metrics, including errors, contrast errors, alerts, features, structural features, and ARIA issues, identifying similarities and differences in compliance levels across A, AA, and AAA levels. The data sets obtained from the WAVE and SiteImprove scans were then compiled into Excel tables.

Findings



The WAVE Web Accessibility Checker, a Google Chrome extension, was used to evaluate the accessibility of the home pages. The WAVE tool assessed the pages against WCAG 2.1 checkpoints and identified accessibility issues in six categories: alerts, errors, features, contrast errors, ARIA, and structural elements.

The data shows that ARIA issues (1,575 or 39.68%) far surpass all other categories, accounting for most identified issues. This pattern is also evident in individual school reports generated by WAVE. A significant number of issues also relate to structural elements (749 in total or 18.87%), accounting for more than four times the number of errors (182 or 4.59%), more than double the contrast errors (369 or 9.30%), and substantially more than features (388 or 9.78%). Alerts were also prevalent, numbering 706 (17.79%) across twenty schools. The WAVE tool assessed 661.5 accessibility issues per school home page on average. This supports the hypothesis that the majority of Irish post-primary school home pages fail to adhere to several WCAG 2.1 checkpoints.

These broad results are also reflected when the data relating to individual schools is examined more closely. The average number of accessibility issues across all categories for the sample was 198.45. There was a significant discrepancy between the best-performing school, with 89 issues, and the worst-performing school, with 624 issues. The range between the sample's best and worst-performing home pages is substantial, with a difference of 535 issues.

The significant diversity of accessibility issues identified on school home pages is evident. This is particularly apparent regarding individual categories. One school had 333 ARIA issues, while two others had five or fewer. In contrast, no ARIA issues were detected for four school sites. This disparity is also evident when examining the smallest category of accessibility issues: errors. For instance, 22 errors were found on one school's page, while another school had no errors present. A total of 3,969 accessibility issues were detected by the WAVE tool, confirming the hypothesis that the majority of Irish post-primary school home pages fail to adhere to several WCAG 2.1 checkpoints.

The second tool used to evaluate the sample was the SiteImprove Accessibility Checker, a Google Chrome extension. As with WAVE, the SiteImprove checker assessed the pages for compliance with the WCAG 2.1 checkpoints, classified into five categories: accessibility best practices, WCAG 2.1 levels A, AA, and AAA, and WAI-ARIA authoring practices. WCA 2.1 level AAA issues were the most numerous, at 1,449 or 53.75% of the total issues detected. This trend is also apparent in individual reports produced by the SiteImprove checker. A substantial number of issues relate to the WAI-ARIA authoring practices category, numbering 640 or 23.58% of the total. This represents more than three times that of level A (200 or 7.37%) and more than eleven times that of level AA issues (56 or 2.06%). Additionally, WAI-ARIA authoring practices issues were substantially more than level AA issues (359 or 13.23%) identified. The ARIA figure is considerably lower than the ARIA issues discovered by the WAVE tool, although ARIA issues are nevertheless the second highest accessibility issues identified by the Siteimprove checker.

Another significant aspect of the Siteimprove results is the considerably higher number of contrast errors detected (730) across all three WCAG 2.1 levels

(A, AA, AAA) in contrast with the WAVE tool equivalent at 369 (see Figures 8 and 9). Overall, the SiteImprove checker detected 542.8 accessibility issues per home page, substantiating the hypothesis that the majority of Irish post-primary school home pages fail to adhere to several WCAG 2.1 checkpoints. A substantial number of issues relate to the WAI-ARIA authoring practices category, numbering 640 or 23.58% of the total. This represents more than three times that of level A (200 or 7.37%) and more than eleven times that of level AA issues (56 or 2.06%). Additionally, WAI-ARIA authoring practices issues were substantially more than level AA issues (359 or 13.23%) identified. The ARIA figure is considerably lower than the ARIA issues discovered by the WAVE tool, although ARIA issues are nevertheless the second highest accessibility issues identified by the Siteimprove checker.

The data reveals significant disparities amongst the sample sites selected. The average number of accessibility issues identified across all categories was 120.6 per home page, with substantial variations between the top and bottom performing schools.

There is also considerable diversity evident across the sample regarding the type of accessibility issues detected on school home pages, especially within the various categories. The SiteImprove checker detected 2,412 accessibility issues against the WCAG 2.1 checkpoints, confirming the hypothesis that the majority of Irish post-primary school home pages fail to adhere to several WCAG 2.1 checkpoints.

This study sought to determine the extent to which secondary school website home pages in Ireland adhere to the Web Content Accessibility Guidelines (WCAG) 2.1. Findings revealed a categorical failure in compliance with both domestic and EU legislation. Automated evaluation detected accessibility issues relating to screen contrast errors along with inadequate ARIA and structural elements. The significant variation in adherence to WCAG 2.1 checkpoints revealed a distinct lack of uniformity in compliance. The results found that ARIA practices account for a significant portion of the accessibility issues for Irish schools. ARIAs improve the semantics and accessibility of digital scripts, supporting accessibility for users who rely on assistive technologies such as screen readers (*Alim, 2021; WebAim, 2023*). Consequently, integrating suitable ARIAs is crucial in ensuring web content is accessible to all individuals.

Perhaps the most surprising feature of the findings relates to the total absence of accessibility statements on all twenty school sites, further exhibiting the apparent systemic failure of the sector to adhere to EU accessibility mandates. Accessibility statements are a forthright way to convey a site's visitors' accessible attributes and restrictions *(Marcus-Quinn and Hourigan, 2022)*.

Correspondingly, the absence of such statements on all sites confirms the study's second hypothesis and represents an egregious failure to uphold the values of inclusivity in Irish education.

Conclusions

This research indicates widespread shortcomings in adherence to accessibility guidelines, which hinder access to online content for people with disabilities, including students, parents, and school staff visiting school websites. This was also evident in the NDA's report (2023). This ethical facet of web accessibility is a crucial aspect of the findings. No accessibility statements were found in any of the samples, which suggests that this part of the EU mandate is not well-known or valued in the Irish post-primary education system.

As Marcus-Quinn and Hourigan (2022) suggest, developing an accessibility statement showcases a school's dedication to accessibility for all users, a sentiment also shared by the legislation. The omission of accessibility statements on school websites indicates noncompliance with international best practices and a missed opportunity for Irish schools to demonstrate their commitment to fostering inclusivity.

References

Alsaeedi, A. (2020) 'Comparing web accessibility evaluation tools and evaluating the accessibility of webpages: proposed frameworks.' Information, 11(1), 40. https://doi.org/10.3390/info11010040

Central Statistics Office (2023) Census 2022 Profile 4 - Disability, Health and Carers - CSO - Central Statistics Office [online], www.cso.ie, available: https://www.cso.ie/en/releasesandpublications/ep/p-cpp4/census2022profile4-disabilityhealthandcarers/ (Accessed: 9 February 2024).

Department of Education (2022) Digital Strategy for Schools to 2027. [online] Gov.ie. Department of Education. Available at:

https://www.gov.ie/en/publication/69fb88-digital-strategy-for-schools/

European Commission (2016) Accessibility of public sector websites and mobile apps. [online] Europa.eu. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=LEGISSUM%3A4314916 (Accessed: 3 February 2024).

Houses of the Oireachtas (2022). Schools Administration – Tuesday, 26 Apr 2022 – Parliamentary Questions (33rd Dáil) – Houses of the Oireachtas. [online] www.oireachtas.ie. Available at: https://www.oireachtas.ie/en/debates/question/2022-04-26/912/?highlight%5B0%5D=20447&highlight%5B1%5D=22

Kantardzhiev, K. (2022) What you need to know about Siteimprove Accessibility Checker, Top Web Accessibility Checker. available at: https://www.topwebaccessibilitychecker.com/reviews/siteimprove/ (Accessed: 26 November 2024).

Marcus-Quinn, A., & Hourigan, T. (2022) The EU Web Accessibility Directive – and what it means for school websites. Leader Magazine.

https://www.researchgate.net/publication/363740268_The_EU_Web_Accessibility_Directive_-_and_what_it_means_for_school_websites

National Disability Authority (2023) What Are the EU Web Accessibility Requirements?, Available at:

https://nda.ie/monitoring/eu-web-accessibility-directive/what-are-the-eu-web-accessibility-requirements

National Disability Authority (2023) EU Web Accessibility Directive, available at: https://nda.ie/monitoring/eu-web-accessibility-directive

Parvin, P. Palumbo, V., Manca, M. and Paterno, F. (2021) 'The Transparency of Automatic Accessibility Evaluation Tools', in Proceedings of the 18th International Web for All Conference, New York, USA April 2021, Association for Computing Machinery, Available at: https://doi.org/10.1145/3430263.3452436.

Pobal (2022) Pobal HP Deprivation Indices. Available at: https://data.pobal.ie/portal/apps/experiencebuilder/experience/?id=3b0acba7eb694ffa85340a60f81d516c

WebAim (2023) Wave Web Accessibility Evaluation Tools, Available at: https://wave.webaim.org/

Web Accessibility Initiative (2023) Introduction to Understanding WCAG. Available at:

https://www.w3.org/WAI/WCAG22/Understanding/intro#understanding-the-four-principles-of-accessibility

It's Who I Am, Not What I Do

Alison Hramiak

On the way back from a trip 'up North' (further up as it were) to see my eldest son, we stopped in Boroughbridge (https://www.visitharrogate.co.uk/explore/boroughbridge) for lunch. When I say 'lunch', I mean we picked up some pies from the butchers to eat by the mediaeval market place. There's a fabulous stone structure, the Market Well, where you can sit on the steps in the sunshine and watch the world go by. It's a lovely town, dating from before Roman times, and well worth a visit for its history, geography, and, of course, its pies. As a family, we are good at pies. But I digress.

Image Credit: Alison Hramiak

The reason I started with this was because, on this occasion, as we crossed the road from the butchers to sit in the sun by the Market Well, a large group of secondary school children turned up and took all the spaces. It's a free country, so we sat on a bench by the steps instead. The two teachers with the group split them into two smaller groups and proceeded, with the aid of several teaching assistants, to talk to them about the town and set them some work to do from where they sat.

Not one to miss an opportunity to learn more about the place, I sat quietly and listened in to the lesson behind me. The teacher had a lot of interesting things to say, and I was hooked. It wasn't long before the teacher trainer in me kicked in, and I realised I was actually observing the lesson and thinking about how it could be improved. The lads that sat at one edge had to be told over three times to pay attention. They mostly sat watching me and mine eating our lunch. The teaching assistants moved around the group of pupils, picking up dropped pens and helping some find the right pages. Unfortunately, the teacher could not be heard by all and forgot to check to see if everyone knew what they were doing, so by the time she set them on their first task (counting cars), many of them didn't know what to include (moving or not, van size or not, different colours, camper vans etc.).

All of this in about 10 minutes. We left shortly after having finished our lunch, and so I wasn't able to continue my 'observation'. Don't get me wrong, I don't think it was an easy task, doing an outside lesson with lots of distractions, and I reflected on what strategies could get the lads more engaged and ensure all knew what they were doing. Outside lessons are much harder than indoor ones in terms of behaviour management, not least because you have no real control over the environment you are teaching in. A windy day, at a busy junction, with lots of distractions... not the ideal place to try to be heard.

One idea that came to mind was to make use of their mobile phones, even if it meant some had to share. They could collect data on their phones–you might even give them the choice of how they collected their data–photos, audio recordings, typing in to a notes app (and there are numerous ones available), for example. You could then get a discussion going comparing how easy or hard

it was to collect data 'long-hand' (on paper) versus using technology to assist with this. This also allows you to challenge them to think about how they turn the data they have collected into useful information that others can use. Just an idea.

This then led me to think about how, after COVID and the lockdowns, when such lessons were impossible, what a privilege it is to be able to go to such a lovely spot, and learn 'in situ', actually out there in the fresh air on a trip. Then, because of the way my mind works (and because of the way I had immediately gone into 'observation mode', with lots of ideas for how to help the teacher make the lesson better for the kids who were falling behind, not really getting it, or hearing it), I thought about how we might have left pupils behind after COVID. I thought about how those pupils with particular needs, or those who had had difficult times at home during COVID lockdowns. They might still be feeling the after effects of covid. Might still be feeling behind, neglected, or worse.

With this in mind, I wrote the following poem to try to make us think about the kinds of things that for some pupils, for those with specific needs, might not yet be behind them.

Post COVID: Special Needs

What happens to …
the 'rear' kids?
The ones with the silent voices
(that) go unheard.
Their sound not travelling
from the back
of the class.
Who listens out for them?
Are we so deaf now?
So immune?
Or the 'fear' kids?
The ones with the hidden bruises
(that) go unseen.
Their marks not travelling
from beneath
their low sleeves.
Who watches out for them?
Are we so blind now?
So immune?
Or the 'beer' kids?
The ones with the slurry excuses
(that) go unbound.
Their gaze not travelling
from the front
of their face.
Who dares ask much of them?
Are we so scared now?
So immune?
Or the 'tear' kids?
The ones with the cover stories
(that) go untold.
Their chairs not travelling
from the door
of the room.
Who sits and talks with them?
Are we so numb now?
So immune?
Or the 'peer' kids?
The ones with the fewer friends
(that) go alone.
Their appeal not travelling
from the screens
of their phones.
Who inspires heart in them?
Are we so cold now?
So immune?
What happens now?
Now that they've missed
so much.
Who will pick up the pieces?
Will you?
Will I?

I've used it in my teaching sessions at SHU. It's a useful starting point for discussion in sessions when we start to explore the individual needs of learners, and how we might take this into account when we teach them. It makes the trainees think more carefully and more deeply about their own learners on placement, and how they could adapt their teaching (and learning) to better meet their needs.

So, when you're out and about, or in and teaching others how to teach, think about this poem and about those lads at the edge of that outdoor lesson in Boroughbridge, or maybe about how best to engage them. And remember this: We are more than what we do. Training teachers, being a teacher, is, for me, who I am and probably who I will always be–even during a pie lunch in North Yorkshire.

Bouroughbridge: Mark Percy ,Wikimedia CC BY SA

Books and Articles of Interest

In this section, we would like to draw your attention to some of our members' recent publications that you may be interested in reading.

If you have a book, article, blog, or podcast that you think our members would enjoy and find useful, please contact the editors at: emma.whewell@northampton.ac.uk and helen.caldwell@northampton.ac.uk.

Our next issue will be in Spring 2025, and we welcom contributions for this edition.

'Novel Spaces as Catalysts for Change: Transformative Learning through Transnational Projects',

Caldwell, H., Whewell, E., West, A. and Tiplady, H. (2024)

Education Sciences, 14(9), p.954. Available at: https://doi.org/10.3390/educsci14090954

This paper discusses data related to the final phase of a six-year project entitled *Digital Learning Across Boundaries (DLAB): Developing Changemakers*. It explores university students' growing perceptions of themselves as changemakers as they experience novel physical and digital spaces, drawing on the reflections of seven undergraduate education students from England who joined students from five European countries in the final year of the project.

The Possibilities of CAD

Richard Smith

https://amazingict.co.uk/the-possibilities-of-cad/

Richard explores the world of CAD in his blog. CAD refers to the use of computers in creating, designing, and modifying within a three-dimensional digital space. This means that students can create a digital prototype of a physical object on their computer without having to build anything for real, and, unlike with paper drawings, they can rotate the model in 360 degrees.

'

Interconnectedness, Place and Growth: A visual essay on transformative learning', Visual Studies

West, A., Caldwell, H., Tiplady, H., and Whewell, E. (2024)

[online], pp.1–6. Available at: https://doi.org/10.1080/14725866X.2024.2325614

This visual essay uses images to represent interconnectedness, place, and growth through experiences within a transnational educational research project. The transnational project ran for six consecutive years and involved five European countries: Belgium, Denmark, England, Norway, and Spain. Called *Digital Learning Across Boundaries (DLAB),* the project sought to explore digital learning through co-creation and to cross geographical, personal, emotional, and environmental boundaries.

Teaching and learning with ICT in the Primary School.

3rd edn. Routledge.

Younie, S., Leask, M. and Burden, K. (eds)

This fully updated third edition of *Teaching and Learning with Technologies in the Primary School* introduces practising and student teachers to the range of ways in which technology can be used to support and extend teaching and learning opportunities in their classrooms.

Illustrated throughout with case studies and examples together with a glossary explaining key terms, chapters focus on how technology-based practices can support the teaching of individual subjects, as well as a range of teaching and learning styles. Key and new topics covered include:

- Supporting reading and writing with technology
- Technology in the early years
- Developing e-skills of parents

- Use of virtual reality in learning
- PedTech
- Resilience in the digital world

WHAT iS MESH?

OECD TALIS research shows that no country is managing to keep teachers up-to-date in subject and pedagogic knowledge. Digital tools allow new solutions to intractable problems.

MESH is a design for a teacher/researcher-led, international knowledge management system for teachers using digital tools to keep costs low.

MESHGuides are research summaries, updated periodically, written for teachers (and parents/carers), linked to the research giving rise to the advice.

MESHConnect describes the collaboration and international networking part of the MESH knowledge management and mobilisation strategy.

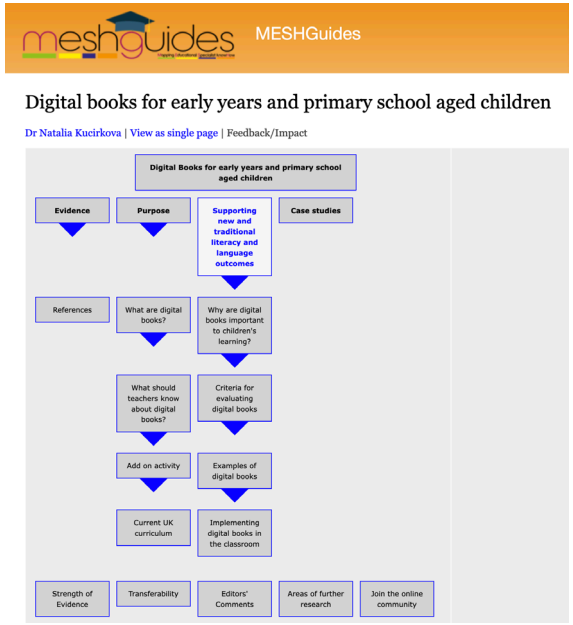
The report from the MESH Global Teacher Education Knowledge Mobilisation Summits, held in 2016/7, outlines a low-cost 'marginal gains' strategy and knowledge management system for the education sector to resolve the problem of access to all the latest knowledge. All educators and organisations can contribute, so collectively we can achieve UNESCO SDG 4. The MESH system was presented at the UNESCO/ Teacher Task Force conference in Lomé, Togo, in September 2017, and as a result worldwide, voluntary partnerships are putting the ideas into practice. MESH members are keen to collaborate with TPEA and MESH members.

MirandaNet/TPEA members have just contributed two MESHGuides that you may find relevant to your practice:

Developing teacher professional development programmes through practice-based research principle (https://www.meshguides.org/guides/node/2475)

Online Collaborative Learning https://meshguides.us7.list-manage.com/subscribe/post?u=71f13239086663e31bef91aa1&id=642fa2937e

Naace and TPEA members are invited to sign up for the newsletter to keep in touch.



Contributing to the Next Edition

We welcome contributions for the spring edition of Advancing Education. Theo Kuechel has designed the layout and worked on the range of illustrations, and we are keen also to extend the types of articles we can offer using techniques such as video. Please feel welcome to contribute to this enterprise by sharing in a more conversational style than can be used in the more traditional academic journals. For example, where in academic papers the results are recorded at the end, in a newspaper the main message appears in the headline and the starting paragraph. The writing formula journalists use is: where, what, when, why, and how. Myself (Christina) and the new editors, Dr Helen Caldwell and Dr Emma Whewell, are always willing to give advice on articles you submit.

Authors

Simon Chapman

Simon is the Programme Leader for primary education at the University of Northampton. For his PhD, working with the Centre for Educational Research (CER), Simon is exploring physical education globally, considering the types of knowledge 'consciously incompetent' teachers require to become better prepared to teach the subject irrespective of their primary teaching context. Simon is interested in the role of developing technologies in education. More recently, he has been researching the role of extended reality (XR) resources in teaching and learning and has become the leader for the XR Special Interest Groups as part of the University of Northampton's Centre for Active Digital Education (CADE).

Professor Carolyn Haythornthwaite

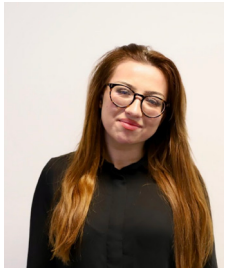
Caroline Haythornthwaite has held academic and administrative positions as Professor at University of Illinois at Urbana-Champaign (1996–2010), The University of British Columbia (2010–2016), and Syracuse University (2016–2021). In 2009–10 she was Leverhulme Trust Visiting Professor at the Institute of Education, University of London, where she gave a series of lectures on learning networks and completed E-learning Theory and Practice (2011) co-authored with Professor Richard Andrews. She is also co-editor of The SAGE Handbook of E-Learning Research (2007, 2016). She has an international reputation in research on e-learning, virtual communities, and distributed knowledge from a social network analysis perspective, and the impact of social media and the Internet on learning, social interaction, and virtual communities. Current work examines moderation of anti-social behaviour online in association with the Social Media Lab at Toronto Metropolitan University

Dr Elizabeth Hidson SFHEA

Dr Elizabeth Hidson's education career began with teaching ICT, then school senior leadership, before moving into higher education. She has been a researcher on a range of international educational technology research projects as well as teaching on PGCE, MA, and doctoral training courses. In 2018, she joined the International Initial Teacher Training Team at The University of Sunderland. She is now a Research and Knowledge Exchange Fellow, programme leader for a SCITT PgCert Education course, and module leader for an M-Level school-based research module on the PGCE Education and PGCE Education with iQTS courses. Elizabeth's research interests include digital tools for reflective practice. Elizabeth combines practitioner research and dissemination with her commitment to teacher education.

Alison Hramiak

Alison Hramiak is a recently retired Senior Lecturer in Education from Sheffield Hallam University who now spends her time writing poetry and reviewing history books and refugee stories as well as poetry anthologies. Her poem featured in this article is published in New Contexts 4: An Anthology at: https://coverstorybooks.com/new-contexts-4/



Jennifer Lovelock

As the Community Entity and Professional Development Manager at ViewSonic, I oversee our ViewSonic Educator Community, which supports educators through innovative hardware, software, and educational solutions. My role involves creating lesson resources, engaging with educators nationwide, collaborating with educational influencers, and gathering feedback from teachers. With a background in teaching students with SEND in further education, inclusivity is a core passion of mine. I believe that fostering communities of practice and leveraging edtech can significantly enhance teaching practices and build networks of support.

Ann Marcus-Quinn

Dr Ann Marcus-Quinn is an Associate Professor in Technical Communication and Instructional Design at the University of Limerick, Ireland. With a PhD in Education and Technology, her research focuses on the intersection of digital tools and learning, particularly in developing innovative educational resources and methods for diverse learner groups.

Ann.Marcus.Quinn@ul.ie

Beth Mead

Beth Mead is currently a safeguarded secondary school pupil, who has published several international papers on the creative use of ICT and Computing, including original work in Scratch and Python. She has presented her work to teachers at several international conferences.

Jane Mills

colour in design, textiles for fashion, and fashion products. She holds a First-Class Honours degree in Fashion & Textiles, an MA in Textile Design, a Postgraduate Certificate in Academic Practice in Higher Education, and is a Fellow of the Higher Education Academy.

Jane was awarded the Society of Dyers & Colourists' Medal for 'Creative & Innovative Use of Colour in Fashion Design Education' and won the Society of British and International Design's 'Visionary Tutor of the Year Award' in 2018. In 2023, she received her institution's Learning and Teaching Award.

Jane is a highly experienced academic known for developing innovative teaching methods that benefit both academia and industry. She leads the student-industry interdisciplinary projects with global brands such as YKK, Intelligent Label Solutions, Pittards PLC, and Schwarzkopf.

During the pandemic, Jane's teaching was recognised as exemplary by the university leadership. She quickly adapted to online learning, creating engaging approaches that resulted in high student satisfaction. Her expertise in online delivery contributed to the 2021 Quality Assurance Agency for Higher Education (QAA) publication, 'The Impact of Good Practice in Digital Delivery on Student Engagement, Progression and Achievement.'

Jane has a strong track record in designing 21st-century learning experiences, engaging Generation Z, and developing future skills through video technology and blended learning. Her current focus is on the impact of AI on how creative content is produced, distributed, and consumed, researching its implications for both the creative industries and higher education.

Devon Rossetti

Devon is a senior lecturer in education at the University of Northampton. She is the programme leader for the international QTS course (iQTS). Devon is also a PhD student whose research focuses upon immersive learning environments in the early years.

Jamie Sullivan

Jamie Sullivan is an experienced educator at both post-primary and tertiary level. His research interests focus on digital learning, neurodiversity, and accessibility within Irish education.

jamie13sullivan@hotmail.com

Lawrence Williams

Lawrence Williams is an experienced classroom practitioner and teacher trainer. He has received many national and international teaching awards, and his work in the creative use of IT and computing has been published in several languages. He is TPEA Specialist Leader in edtech Education, an Associate Member of the National Conference of University Professors, and a member of the IFIP Technical Committee 3: Education.

Dr Jenny Wright

Jenny completed her PhD at the University of the Arts London, where she explored the role of drawing and drawing-like activities within the field of medicine and medical education. Her work focussed on the haptic nature of surgery and observation of head, neck, and ophthalmic anatomy. She used information from the EYESi ophthalmic simulator at Moorfields Hospital London, where she was artist in residence, and data from the HapTEL system at Kings' College London faculty of Dentistry, Oral and Craniofacial Sciences. Her ongoing research builds on her personal drawing practice, integrating observational drawings with images and videos of microscopic cell samples, with a particular focus on breast cancer and the evolution of scar tissue.

Jenny continues to work with artists and medics as part of the UK Drawing Research Network, delivering talks online and publishing work with colleagues involved in biomedical visualisation in the UK and abroad. She also has strong links with colleagues in universities across the world, as chair of the annual Brescia University colloquium held in Italy. She continues to exhibit her artwork in exhibitions examining links between drawing, health, and wellbeing.


9 781234 567897