

# The baton is handed on...

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A year ago Eddie Norman was sitting writing his final piece as Editor of this Journal. After ten years of excellent service and leadership as Editor, he had finally decided to hang up his pen – or maybe his keyboard. In that Editorial he looked back over the ten years he had presided over the Journal and reflected back on the fact that, at the point he had taken on the role, the Journal had just been re-launched with 'International in its title'. In his last editorial, Eddie analysed author contributions and 'online' journal visits to see just how international the journal really had become. During that first year (2005) there was clear evidence that those publishing in the journal represented an international group of researchers and scholars – articles were from New Zealand, Scotland, Singapore, the USA and England – but the vast majority were from England. Over the last ten years the balance has shifted. In 2014, the Journal published 2 articles from Australia, 1 from Cyprus, 3 from Finland, 1 from France, 1 from Iceland, 1 from Malaysia, 2 from the USA and 3 from England. Online readership has grown and shown a similar shift in balance – in 2010 there were 400 'serious' visitors a month from 128 countries, in 2015 the numbers had grown to nearly 800 'serious' visitors from 167 countries.

Healthy developments. But what these figures hide is a further shift in the focus of articles. In 2005, of the 11 articles published, 9 focused on school education in Design & Technology or Technology Education and 2 were from Tertiary Design Education. In 2015, of the 17 articles published, 9 were from school Design & Technology or Technology Education and 8 were from Tertiary Design Education.

In his last editorial, Eddie reported that, following two 'special' issues (20.3 and 21.1) a new Editorial 'team' would be fronting the journal and the reason for dwelling on the figures above is to provide some context to the new 'team'. The shape of the Journal is evolving – more international and also more inclusive of research in Design, Technology and Design & Technology Education from all age ranges – in the words of the DRS/Cumulus 'special' issue in 2014, "from Kindergarten to PhD". To represent this shift, Eddie has been replaced by a duo – Kay Stables, with a background predominantly in schools' education and Erik Bohemia whose expertise lies in Tertiary Design Education. Fortunately for the new editors, David Spendlove has agreed to continue as Co-editor.

Let us introduce ourselves.

Kay has been a school teacher, a research in Design and Technology Education, a teacher educator, founding member of the D&T Association (in 1989!) and now a Trustee of the Association. Research and writing has focused around primary and secondary schools, design and technological capability, assessing capability, creativity, sustainability and designerly wellbeing. She has been on the Journal's Editorial Board since 1995 and has wide experience of editing and reviewing for other journals and for international conferences. In addition, she has edited two major international texts – *Environment, Ethics and Cultures: Design and Technology Education's contribution to Sustainable Global Futures*, with Steve Keirl, published in 2015 and *Critique in Design and Technology Education*, with John Williams, to be published later this year. Whilst she has contributed to many international education initiatives, her professional career as a teacher, lecturer and researcher has been based in London.

Erik is the Programme Director in the Institute for Design Innovation at Loughborough University, based at its London campus. Erik has contributed to informing Design pedagogy by developing an innovative international collaboration named the Global Studio <http://theglobalstudio.eu/>. The Global Studio provides a platform for undertaking research and developing cross-institutional and cross-disciplinary collaboration. The Global Studio equips students with specific knowledge and skills required to work in globally networked organisations and distributed design teams. Over the past 10 years close to a thousand students have taken part and benefited from this initiative.

His longstanding interest in design education research led him to initiate a series of conferences for Design Education Researchers. The conference attracts researchers covering the full spectrum of design education including primary, secondary and higher education. These international conferences were hosted in Paris (2011), Oslo (2013) and Chicago (2015). Carefully selected papers presented at these conferences have been published in this journal. He is also co-facilitator of the Design Education Special Interest Group (DESIG) affiliated with the Design Research Society. DESIG, together with the Institute of Engineering Designers, organises an annual international conference on Engineering and Product Design Education in higher education. The next conference will be hosted by Aalborg University in Denmark in September (<http://epde.info/epde2016>).

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We are both excited about our new roles and working together to take the baton from Eddie and help shape the Journal into its next decade. Over the coming months, along with colleagues from the D&T Association and the Journal's Editorial Board, we will be reviewing existing structures, guidance and strategy for the Journal and will bring news of developments in our next editorial. But for now we are keen to simply introduce this new issue.

We are delighted that, despite new editors, other traditions die hard and readers will be pleased that Richard Kimbell continues to start the Journal with his usual wry reflections on life in the Reflections section. In a piece entitled 'The north bank' he ponders on ancient maps of towns and cities and finds himself wondering why it is always the north bank where all the development takes place. His musings, as always, take us on a journey that ends up with some philosophical insights into design, technology and education...and we leave you to find out for yourselves where the current journey ends.

The first research article, *Cultural Memory, an asset for Design-driven Innovation within the Creative Industries sector: Lessons for Design Education* comes from the Higher Education Design context in Botswana. Richie Moalosi, Keiphe Nani Setlhatlhanyo and Oanthata Jester Sealetsa present two case studies in which designers were specifically designing from Botswanan cultural memory, the first taking the traditional craft of basket weaving as a starting point, the second taking the concept of 'enduring bond' as a theme inspired from the African practice of carrying a baby on a mother's back. The case studies both developed in a creative industries context and, in the article, are set within a rich framework of understanding of the significance and potential of designing that is embedded in cultural traditions, working closely with communities and looking forward to the future through their designing. The article also presents a valuable case in support of alternative knowledge systems that deny the omnipotence of western, neo-liberal approaches. In addition to the insights into the case study methodology that was used in the research, the article provides valuable guidance on using the approaches within the paper in design education settings. This includes the proposal of a process using a model derived from the research. Whilst the authors are working in a tertiary design education context, there is much useful insight for school design projects to draw on – something that is important for all, but that will have particular resonance in English schools where currently the important of projects embedded in rich and authentic contexts is being highlighted as of high importance.

This is followed by two articles that target pre-service teacher education, one from New Zealand and one from Finland. In *Pre-service teachers' conclusive principles for teaching Technology Education* Paul Snape presents research that was undertaken to identify what the most significant 'conclusive principles' were from student teachers at the end of their three year teacher education programme. The article provides insight into the learning and teaching that they engaged in during their programme and to the research approach that was taken. The findings show interesting and positive results in that, while a broad range of learning was identified, from organisational to pedagogic dimensions, the four items identified as most important were all pedagogic, with the critical aspect of authenticity at the top of the list. It would be interesting to repeat the study with these same teachers at some point in the future to see how what Snape describes as their "naïve personal epistemologies" have strengthened or changed.

In the Finnish context, Henrikka Vartiainen provides insight into the potential of taking a collaborative learning approach in teacher education through her article *Designing connected learning: Emerging learning systems in a craft teacher education course*. The student teachers involved in the research were all Craft Science majors in a five-year Master of Education programme. The study presents insights from an intervention in which students, working in small groups, worked from an open-ended learning task in which they engaged in a Learning by Collaborative Designing process to create a learning resource that they subsequently trialled with pupils in school. The focus of the research was on the processes the students used and the impact on their own learning as teachers. Data were gathered that documented all aspects of the process, focusing particularly on the emerging object of learning (both students' and pupils'), the emerging learning community, within and beyond the university and the tools that were used – tools for thinking, making and communicating. In the context of tools, the students chose to incorporate digital learning tools into the resource. The findings from the study show the potential for the approach in placing students in a role of active participation through which they develop a broad range of pedagogic skills through the process of co-creating, sharing and communicating in the context of what the authors describe as a 'dynamic ecosystem' of an extended learning network.

Two further papers from Finland explore ongoing issues at a particularly pertinent time – the shift to a new National Curriculum to be implemented in 2016.

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In *Female Technology Education teachers' experience of Finnish Craft Education* Sonia Niiranen and Antti Hilmola provide an article that explores gendered processes that girls and women experience in technical craft (as opposed to textiles craft) and technology education environments. The broader context of the article is a shift in the Finnish curriculum from 2016 to not separate out technical and textiles crafts as had previously been the practice. Through a series of semi-structured interviews, the perspectives of seven women working in these areas are presented. The areas covered their own attitudes to technical craft and technology education, why they wanted to teach these and what experiences they had in relation to gender as pupils in school, during their studies to become a teacher or during their time as a teacher. The results show significant ways in which the participants each experienced gendered behaviour in respect of divisions of labour, symbols and images used, interactions between men and women and the ways in which they saw their own identities. The article builds on previous research by the authors that shows a massive gendered split prevalent in recent craft education in Finland at the point when pupils can choose between technical and textiles crafts (from Grade 5). Their hope is that their research will be of value in supporting the challenging implementation of the new curriculum.

In *The teachers' views on the significance of the design and craft teaching in Finland* Marja-Leena Ronkko also explores the perspectives of teachers, but this time into their views of the place of design in what the Finnish curriculum describes as an holistic craft process. The 2004 National Curriculum made a clear place for design within craft education and this has been further strengthened in the new curriculum to be implemented this year. Nine teachers were involved in the study, five participating in semi-structured interviews and four in writing an essay about the meaning of designing in their lessons and students' design process. The teachers fell into one of two camps – design oriented and technique oriented, with some valuing design but feeling incapable of incorporating it. The article explores the opportunities, priorities and challenges that each of the teachers identified and concludes that both technique and design are important in the new curriculum's holistic approach to craft and that teachers need to reconceive the subject – a challenge that will require professional development to be effectively implemented.

In the final research article, the focus remains on two countries who still retain an emphasis on craft education and where the focus of the research was to explore

technological reasoning in these contexts. The article, *Examining technological knowledge and reasoning in Icelandic and Finnish comprehensive schools*, Ossi Autio gives an account that, while not explicitly comparative, gives insight into two curricula that have parallels (although different curriculum structures) that focus broadly on craft education, environment and technological understanding. In the study, 11 and 13 year olds in each country completed a questionnaire aimed at evaluating students technical understanding and reasoning and exploring the relationship between this and their craft education. Autio concludes that, in respect of technological understanding and reasoning, the results in both countries are disappointing and had diminished from a previous study in 1997. One conclusion is that too much emphasis is placed on production skills and too little on technological reasoning. There was an interesting difference between the two countries in that Icelandic girls scored more highly than their Finnish counterparts. The differences in curriculum structure are suggested as a reason for this. This final article has resonance with both of the preceding articles in suggestions about the impact of ongoing gendered behaviours in the curriculum and also the need for teachers to embrace the totality of new curricula that stress matters beyond technique.

This issue concludes with a review by Nigel Zanker of the recently published edited collection *The Future of Technology Education*, the first book in a new series on contemporary issues in Technology Education from Springer.