

***For the implementation of a new learning and teaching model for digital media design students in order to enhance real-world learning and graduate employability.***

**Overview of contribution and context**

Most undergraduate digital media design students seek employment in the creative industries directly after finishing their undergraduate degree, and therefore must be work-ready upon leaving university. However, recent studies show that current design education fails to equip students with the expertise and skills suited to the requirements of the creative industries, including a lack of discipline-specific skills, soft skills such as verbal communication and in particular teamwork skills (Ball 2003; Design Skills Advisory Panel 2007; Whyte & Bessant 2007). This issue first occurred in the late 1990s when rapid technological developments led to increasingly complex multi-technology projects, such as online shopping, and as a consequence a switch to multidisciplinary teamwork in the industry. This however did not occur at the same time in education and remains rare today (Design Skills Advisory Panel, 2007; Kelly, 2005; Szenasy, 2004; Triggs, 2004).

I experienced this shortfall in skills while working as both an interface designer in a multimedia company and as Assistant Professor at The City University of New York (1997-1998). I introduced 'web design' as a subject and based the content around real-world projects, a novel approach at the time but one aimed to direct student learning towards industry realities. Student feedback was strong, for example: "*I think this is the best class in the school. It's essential in today's world*" and "*I think we should have more classes like this. It gives us an edge to other designers*" (3<sup>rd</sup> year design students, course evaluation AD450). When moving to Berlin to teach as Professor of Design of Print and Online Media at the University of Applied Sciences Berlin I confirmed through further industry research that digital media design companies had well and truly completed the switch to multidisciplinary teamwork and that students needed to be able to work in and communicate with a team of experts in order to be successful in their careers. This led to further development of the new approach for higher education digital media design students, a learning and teaching model that provides for students to deepen their discipline-specific skills while simultaneously engaging in multidisciplinary learning and practice as an integral part of their undergraduate curriculum. Since commencing at James Cook University (JCU) I have taken these principles to a new level by formally introducing a multidisciplinary, community and industry oriented approach known as the *POOL* model. The integration of industry and community into the learning environment enhances real-world learning and better prepares students for their professional careers. These themes underpin my teaching approach and are in direct alignment with key strategic priorities at JCU, Faculty of Law Business and the Creative Arts and the School of Creative Arts (SoCA) including:

*The School seeks to provide high quality learning experiences, innovative teaching strategies ... and active engagement with communities for the purpose of promoting mutual benefit and knowledge transfer.*

**Criterion 2: Development of curricula, resources and services that reflect a command of the field**

My background as Chair of the Educational Committee for the restructure of the Print and Media Technologies degree programs at the University of Applied Sciences Berlin during the Bologna process, allowed me to introduce innovative approaches to teaching which aligned student learning and graduate outcomes to industry expectations, as well as prepare students for the shift to an increasingly global economy:

*When it came to the re-design of the course curricula, [Ms Fleischmann] chaired the Educational committee and demonstrated a very high level of competence in motivating our very diverse team to find new approaches. Along with team teaching, tutorial modules and internationalisation, the resulting concepts won wide acclaim from the business community, which has elevated the course to a new level. (A. Koenig, Prof. Dr. Business and Management, University of Applied Sciences Berlin.)*

Graduates from this program are now working world wide in positions such as Creative Producer at Scholz & Friends (Germany); Director of Marketing of FontShop International (Germany), International Design and Sales at MemoTrek Technologies (Hong Kong), Motion Graphics Designer for Elephantseven (Germany), and as CEO and founder of Metropolitanphotographer (France).

Being invited to join the School of Creative Arts at JCU became another opportunity to explore digital media design education and its relationship to industry in the Australian context. As part of my appointment, I was asked by the Head of School to implement a cutting-edge and leading approach to design education, a major component of which is now applied across two schools at JCU (Creative Arts and IT/Business). Based on research findings I further refined the learning and teaching approach according to the Australian context. This approach, now referred to as the *POOL Model*, is a multidisciplinary system of interdependent collaboration and expertise exchange across university, industry and community sectors based on existing resources in the university environment. It is a framework introduced at undergraduate level allowing students to develop more discipline-specific skills, while experiencing collaborative

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teamwork across different disciplines in order to prepare them for collaborative multidisciplinary practice and meaningful careers in industry.

Since my appointment at JCU I have:

a) implemented a series of industry-oriented projects that scaffold real-world experience for students, and which increase in intensity and specialisation each year; b) refined and positioned the *POOL model* within the curriculum across two Schools (IT/Business and Creative Arts), scaffolding the learning experience of multidisciplinary collaboration across disciplines in 2<sup>nd</sup> and 3<sup>rd</sup> year of digital media design and IT students; and c) achieved significant recognition of the success of these initiatives from industry/community, students and within the organisation.

In order to create a relevant and authentic learning experience for digital media design students at the School of Creative Arts, the following strategies have been implemented into the curriculum:

- multidisciplinary teamwork to create a learning environment that is enriching to each student's individual discipline, as well as complementing and broadening their learning by exposure to and working with students of other creative and non-creative disciplines;
- real-world projects with 'clients' demanding solutions applicable to industry standards resulting in an environment where students learn the realities of a project from initial briefing to presenting the finished project;
- embedding industry professionals in the educational process to ensure relevance of education; and
- engaging the community to allow students to develop an understanding of the social responsibility and the cultural impact they have when serving the wider community or when working directly for community organisations.

The detail of these various initiatives are outlined below:

Subject	Community engagement/ real-world projects	Industries integrated into subject	Disciplines involved/ Multidisciplinary teamwork	Team teaching	Supportive learning activity to explore professional field	Further reference or evidence of support for the project
NM1402 1 <sup>st</sup> year design	North Queensland Military Museum, & Umbrella Studio - TAG seeking re-design of logo	Community client gave briefing to students. Students presented finished projects to client.	Design students	Design lecturer & community client	Research history & current Australian graphic design trends	Letter of mutual beneficial community engagement & support
NM1401 1 <sup>st</sup> year design	Charters Towers & District Recreational Lake Steering Committee seeking corporate design	Community client gave briefing to students. Students presented finished projects to client.	Design students	Design lecturer & community client	Research history & international graphic design trends	Local publication, Townsville Bulletin, Charters Front page Northern Miner
NM2301 2 <sup>nd</sup> year design	La Luna Youth Art, Non-profit organisation seeking new website presence	Community client gave briefing to students. Students presented finished projects to client.  Creative Director gave guest lecture and feedback on project to students. Industry professional instructed in state of the art technology.	Design, IT, Visual Arts, Business, Journalism, Education, Marine biology students learn and work together	Design lecturer, community client & industry professional teach together	Research multimedia design industry & industry practice in North Queensland	Letter of mutual beneficial community engagement & support; statewide & local publications
NM1401 1 <sup>st</sup> year design	Townsville Hospital Foundation seeking re-design of logo	Community client gave briefing to students. Students will present finished projects to client.  Creative industry professional teaches and supervises the community engagement project.	Design students	Design lecturer, community client & industry professional teach together	Research history & current Australian graphic design trends	<i>In process</i>
NM2301 CP2010 2 <sup>nd</sup> year design & IT	LiNQ – Literature in Northern Queensland, literature journal seeking an online presence	Community client gave briefing to students. Students will present finished projects to client.  Creative Director gives guest lecture and feedback on project to students.	Design, IT, Business, Journalism, Education students learn and work together	Design, community client & IT lecturer teach together	Research multimedia design industry & industry practice in Australia	<i>In process</i>
NM3401 CP3003 3 <sup>rd</sup> year design & IT	Focus is on creative exploration to support specialist skills	Creative Director gives guest lecture and feedback on project to students. Industry professional teaches state of the art technology.	Design & IT students learn and work together	Design & IT lecturer teach together with industry professional	Research international multimedia design industry & industry practice	<i>In process</i>

## Statement on sustained student learning, engagement and recognition

### *Recognition from students:*

The subject Web Authoring 1 is a focused example of the *POOL model* in action, where three industry input points are integrated into a real-world scenario which required the redesign of a community arts group's website presence (La Luna Youth Arts). The introduction of a real client, the integration of feedback from an industry professional during the project development process, and the launch of a research activity that engaged students in the exploration of their future workplace (i.e. multimedia companies and trends in North Queensland) created an authentic learning experience for students. Through the collaborative multidisciplinary team approach and the shared learning process, each student had additional time to concentrate on the development of discipline-specific skills, while at the same time experiencing a more holistic and efficient way to approach complex projects as part of a multidisciplinary team.

Thirteen teams with 4-5 students from disciplines such as digital media design, IT, journalism, business, visual arts and marine biology participated. From the 54 surveyed students, 85% indicated a preference to work on a real-world project for a real client in future. Almost the entire cohort (98%, 52 students) found the integrated feedback from the industry professional a valuable experience.

*I love working for real-world clients. This is what we will be doing after we leave uni, so it's great to get some experience at uni. It also makes us push harder with our designs, because we're not just trying to get good marks, we are also trying to impress the client.*

Student feedback on the positive teamwork experience includes:

- *We had someone who was a designer, someone who was good at Flash, and two people who knew about the IT side of things. It was a great.*
- *The different views from the people of different disciplines open your mind to different approaches to various problems.*

The results of student feedback for Web Authoring 1 show that the subject was extremely well received, with the majority of items rated above 4 in all questions; (Ratings: 1 *completely unacceptable* to 5 *outstanding*):

	Student Feedback (SF)		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Average	No of students
NM2301 Web Authoring 1	SF on Teaching	2008/2	4.1	4.3	4.2	4.1	4	4.3	4.1	4.4	4.3	4.2	53
NM2301 Web Authoring 1	SF on Subject	2008/2	4	4.1	3.8	3.9	3.7	4.1	4.2	4.2	4.1	4.0	31

Similar positive feedback from students can be seen in all subjects where real-world scenarios have been integrated since I formally introduced these strategies. Preliminary data obtained in 2009 from students in Web Authoring 1 show very pleasing results: 98% (52 students) agree that it is an advantage to learn and work in multidisciplinary teams at university in order to be better prepared for industry practice.

### *Feedback from colleagues, industry and the broader community:*

The new learning and teaching approach now implemented at SoCA represents a culmination of research conducted over ten years. When first introduced in 2001 the model was well recognised by industry at the time:

*In the latest student presentation I attended, one could see how [Ms Fleischmann's] energy and knowledge motivates students to engage in their projects to produce work of a high professional standard. The 'argonauts' [an internationally known multimedia company] still recruits students who have participated in her courses.... Her ideas ... can only be welcomed from my side, as representative of the industry (Ruth Heinzlmann, Senior Art Director, Argonauten.).*

A recent published report in the print industries' most acclaimed professional journal highlighted the success of the same program with a team of 3<sup>rd</sup> semester students winning an 'Award for Innovation of the German Print Industry' (Deutsche Drucker, pp. 31-34, No.42/18.12.2008).

When I joined the School of Creative Arts, its degree programs had recently undergone a major restructure, with the innovative Bachelor of New Media Arts commencing for the first time that year. While the new degree program provided a basic framework for collaboration, it was only collaborative within the creative arts, hence as discipline leader in the design area I set out to immediately ensure that the collaboration extended beyond to include the discipline of IT for example, in order to reflect current industry practice.

The Head of the IT Discipline at JCU, with whom I am currently team-teaching the most advanced collaborative 3<sup>rd</sup> year subject for digital media design and IT students, acknowledged the new curriculum enhancements in a recent peer review:

*This integration of IT and design offers a new dimension to the learning experience for students and represents Katja's awareness of synergy inherent in communication between Design and IT. While the individual IT components*

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*are relatively traditional: ..., their integration into the overall project is new. The web design example and information about actual design-IT teams assembled by Katja is cutting edge and typify her application of her research and teaching (B. Litow, A/Professor).*

When investigating the employability of design graduates in three major metropolitan areas (Sydney, Melbourne and Perth), as well as in major regional centres of North Queensland (Townsville, Cairns and Mackay) the feedback from the Australian multimedia design industry shows strong support for these initiatives, for example:

*I think that's really excellent for the development of students, because that's almost like imitating a real life scenario. As we were saying before, most projects have collaborations between multiple disciplines. I think it's an excellent experience for students (CEO of multimedia company in Melbourne, Interview 19.11.2008).*

To introduce the new learning approaches to stakeholders and the wider community I was invited to speak at various forums including: the conference/trade fair Post Print Berlin 2006, Germany (Fleischmann, K. (2006). *Study Future: Interdisciplinary curriculum module design for the Bachelor and Master program Print and Media Technology*), and the *Norges Kreative Fagskolen* in Bergen, Trondheim and Oslo as part of a guest lecture series in 2008.

The scholarship of learning and teaching has recently received strong focus as part of invitations to present and publish refereed papers at key national conferences in Australia and Asia:

- Fleischmann, K. (2008). *Overcoming disciplinary boundaries in undergraduate design education: Preparing digital media design students for collaborative multidisciplinary research practice*. Conference paper presented at ACUADS conference 2008. Australian Council of University Art and Design Schools, Adelaide, Australia.
- Fleischmann, K. (2008). *Facilitating sustainable partnerships between university, industry and the community within a new model for tertiary digital media design education*. AUCEA NATIONAL CONFERENCE 2008. Australian Universities Community Engagement Alliance Inc., Sunshine Coast, pp 110-116.
- Fleischmann, K. (2008). *Enhancing employability: a new teaching and learning model to manage the increasing complexity of technology in tertiary digital media design education*. TIC conference 2008. International Conference on Learning and Teaching, Putrajaya, Malaysia.

The necessity to change the way digital media design is taught is reflected in one of the referee's comments from the Australian Council of University Art and Design Schools (ACUADS) which represents over thirty Australian University and TAFE art and design faculties, schools and departments:

*This paper [that defines the POOL model] comes at the right time and will I hope influence ACUADS to move towards more interdisciplinarity and integration at undergraduate level. Congratulations.*

The potential of the *POOL model* to enhance real-world learning and student employability has been recognised in a number of key ways within JCU:

- by the Faculty of Law, Business and Creative Arts in 2007 through a Pro-Vice Chancellor's Teaching Award;
- an invitation in 2008 by the HOS Creative Arts to be co-coordinator of the subject Creative Exchange, which is the 'flagship' New Media Arts third-year subject fostering intra and interdisciplinary collaboration;
- an invitation by the HOS to undertake a major promotional tour in Scandanavia in September 2008 in order to focus on the cutting-edge nature of the model of education offered at SoCA and within the international context;

In 2007 I was invited by the Institute of Technology and Polytechnics Quality Approval Accreditation Audit (ITPQ) to participate as panel member of the New Zealand Qualifications Authority (NZQA) to accredit and monitor a Bachelor degree at the Wellington Institute of Technologies (WelTec). During the accreditation/ monitoring process I shared my ideas and publications on the *POOL model* and which received strong support within the panel:

*At the moment we are having lots of planning meetings for next year and James [James Brodie, Head of WelTec, NZ] has proposed we look at new ways of doing things. I was thinking of introducing 'the pool model' that you describe in your paper because the discussions we are having seem quite close to your idea (e-mail from Grant Corbishley, Senior Lecturer at WelTec, 14 January 2009)*

## **Conclusion**

I remain passionate about preparing students for careers in the digital media design industry and hence continue to create a learning environment that is enriching to each student's individual discipline, as well as complementing and broadening by exposure to and working with other creative and non-creative disciplines as well as industry and community. It is rewarding to see that though developing and implementing new pedagogical strategies, and real-world learning, student employability can be enhanced. In addition, it is fulfilling to see digital media design students develop a passion for their profession, set out to make a difference in their field and enter the profession with a sense of social responsibility and understanding of their contribution to the wider community.