

EDITORIAL

Fostering new pedagogies for a new age

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Fostering new pedagogies for a new age

Since the start of the current millennium, new pedagogies have begun to evolve in response to the need for revolutionising the way learning takes place that will match the scale, scope, speed, and intensity of a fast changing world landscape. Advances in technology, and the affordances they provide for teaching and learning, are changing how students prefer to learn. These technological developments and initiatives are disrupting the status quo in higher education, compelling us to push the boundaries of how we conceptualise the delivery of education. A continued challenge we face is the task of enhancing our pedagogies to cater to the expanding goals and rising expectations of our student clientele in ways that make learning more satisfying, more hands-on, more relevant and meaningful to them. Sharing our experience and expertise in the development and delivery of new pedagogies that will serve our students well in the new age we live in is both a timely and professionally useful activity. It is fitting therefore that our present issue of JNUSTA should attempt to address these concerns.

In arguing that “we are what we learn”, following the familiar adage “we are what we eat”, Ranga stresses the importance of focusing our attention on the development of social and human values in higher education and not just the preparation of students as efficient professionals for the workplace. Learning is an essential survival skill. And our adaptability and flexibility is based on this capacity to learn, with schools and universities primarily assisting in optimising this innate capacity. While we learn through interacting with the world, the way we interact with the world is fashioned by our own experiences which form an integral part of our learning. Perception, memory and learning are intricately linked in this cumulative process of refashioning our experience which then acts as a lens for interpreting and utilising future knowledge. In this way, learning re-configures and reinforces the brain’s neural networks and pathways. It follows then that, if we want our brains to adapt to the changing world through effective learning, we must also change our methods of imparting knowledge. What educational institutes do is develop the skills for acquiring knowledge not easily obtainable by any other means, skills that not only help to access, find and interpret knowledge but modify, explore and extend a vast variety of knowledge that learners need in today’s world. Ranga suggests, however, that university learning generally tends to emphasise the development of professional efficacy required in the workplace or for securing a future career. An equal focus on developing social and emotional values would constitute a more balanced approach to higher education.

Today's students expect their classes to include multiple modes of engagement taking advantage of technology and the learning spaces. Technology, in various forms, can be included to enhance both in- and out-of-classroom learning experiences. Cabibihan presents the experiences he had in enhancing student learning in a graduate level course titled *Instrumentation and Sensors*. To achieve the intended learning outcomes, he employs a combination of classroom demonstrations using physical models of robots (to illustrate components analysis, reverse engineering), case studies (robotic gripper and prosthetic hand to illustrate mechanical and thermal sensing, respectively), multimedia presentations (to involve multiple sense organs so as to facilitate deeper understanding of the subject) and an end-of-semester student conference. Using student feedback scores as a proxy for student motivation, interest and learning, Cabibihan shows how students in four successive cohorts have found their learning experience highly motivating and productive. Many of his students felt empowered by the learning opportunities Cabibihan created – they were even able to engage in the scholarship process producing high quality work that were presented in conferences and published in journals. Cabibihan's work with his course shows that careful design of learning experiences can advance deeper and meaningful learning without significant extra effort or faculty time.

Mobile media is no longer confined only to social dimensions; mobile learning is growing in visibility and significance in higher education and is reshaping the very nature of the pedagogies we use to reach out to our students. Cochrane and Withell report on a study that used mobile social media as a catalyst to drive just such a pedagogical change in the Bachelor of Product Design programme in a university setting in New Zealand. In scaffolding this process, they adopted a three-stage implementation framework along what they term a PAH continuum that followed a progression from teacher-directed pedagogy to student-negotiated androgogy and thereon to learner-generated heutagogy. Additional support was provided by creating communities of practice (COP) among both lecturers and students. For the lecturers, the stages of implementation comprised: (i) establishing a lecturer COP to investigate the affordances of mobile social media, (ii) guidance provided by the researcher who functioned as a technology steward, and (iii) ensuring the appropriate choice of mobile social media on the redeveloped curriculum. For the students, this took the form of adopting mobile social eportfolios for establishing student-generated content in the first year and building upon this in subsequent years, leading by the third year of the course to student-negotiated team projects around student-generated contexts. The outcome was a radical conceptual shift among lecturers and students – both in the way learning was re-conceptualised from teacher-directed to student-generated activity, and the re-categorisation of mobile media from a purely social usage domain to an educational use domain. The study also showed that

elements of pedagogical practice can be successfully transferred across different educational contexts.

We hope that the articles in this issue help us reflect on the need and ways to re-balance higher education with the explicit inclusion of “content” that emphasises social and human values. Education must actively involve incorporation of Learning Sciences into designing learning experiences and using the results of implementation to enrich Learning Sciences – i.e. the closed loop “Learning to Design; Implementing to Learn”. Frameworks such as the PAH and technological advances can be very helpful in this regard.

Happy reading!