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Digital Immigrant Teachers And Digital Native Students: *What Happens To Teaching?*

Shelley Kinash, Kayleen Wood and Diana Knight

The majority of university professors and older teachers were educated without the personal computer, smartphone and/or tablet. The majority of current students regularly use these devices in school and university. Does this gap make a difference to learning? In order to address this question, we have analysed data from two interactive workshops in Australia and a third in the USA. In the workshops, educators brainstormed and presented answers to technology-related questions in groups of their same age peers. Presentations were scored by a multi-generation panel.

Many educational theorists argue that people who have grown-up with personal computers and the internet (digital natives) function and think differently from people who had to adjust to and learn new technologies and approaches (digital immigrants). Some authors suggest that regularly using technologies changes the physical structure of the brain.

Generation theory classifies people into five groups according to their birth year. Generation V includes people born any year up to and including 1945. The Baby Boomers (also known as Generation W) includes people born between 1946 and 1964. This population group is significant because the post-war surge in birth rates means that this group has a higher impact on economics, expenditure of resources and political decision-making than any other group in history. Generation X (born 1965 through 1976) is known as the disruptive generation in that the sixties and seventies brought protests and significant social change. Generation Y is the only classification to include both university

academics and students in that the birth ages span from 1977 through 1994. The vast majority of this group of people used personal computers throughout most of their schooling and adult lives. For this generation, digital technologies are integrated as features of everyday life. Generation Z (born 1995 or later) are beginning to enter universities. Ubiquitous use of personal computers, tablets and smartphones differentiates the hardware of this generation. The internet, texting, YouTube, apps and social networking are the fabric of Generation Z information and communication.

A workshop process was repeated at three conferences and field notes recorded, tabulated and analysed. The first workshop was at the Annual Conference for the Australasian University Building Educators Association. Seventy-five building educators participated. The largest group identified themselves as Generation W (Baby Boomers). The second workshop was an invitational university workshop and thirty-five people attended. The third workshop was held at the Blackboard World education technology conference in New Orleans, USA. Fifty-two people attended.

Workshop participants were divided into generation groups. The groups were presented with three questions. After each, they were given five minutes to nominate a speaker and decide on a response, and three minutes for a group representative to present at a podium.

The questions were:

1. What is your favourite piece of technology and why?
2. What technology did you use when you went to school?
3. Are the generations actually different?

Immediately following each presentation, a three person panel judged the content and presentation quality as one combined score. Panellists held-up score cards ranging from one (low) to five (high).

The panellists were from Generation W, Y and Z. The Generation W panellist was consistently the 'easiest judge'. The Generation Y panellist was a current university student. The Generation Z panellist was a 10-year-old boy. He attended a school with a one-to-one laptop program. He was the 'toughest judge', marking the lowest overall.

The responses across workshops to the first question – what is your favourite piece

Birth Years	Alphabetic Classification	Alternate Names	Teachers/Students
Up to and including 1945	Generation V	N/A	Retired
1946 - 1964	Generation W	Baby Boomers	Teachers
1965 - 1976	Generation X	Digital Immigrants	Teachers
1977 - 1994	Generation Y	Digital Natives	Teachers/Students
1995 - Present	Generation Z	Net Generation	Students

of technology and why – varied from pen and paper because it is a lasting, versatile and reliable technology, to iPhones and iPads because they are fun and have wide-ranging applications. In response to the second question – what technology did you use when you went to school – presenters from the older generations talked about chalkboards and overhead projectors. The consensus across workshops on the third question – are the generations actually different – was that there were differences between the generations in terms of values, attitudes and expectations, but that differences are exaggerated and more a factor of life-stage priorities than changing times and technologies.

The Generation W (Baby Boomer) groups won the competition at the first two workshops. The Generation Y group won the third. This result might be explained by statistics and probability. There were two groups of Generation W delegates at each of the first two workshops meaning that there was a higher chance of one of these groups being awarded the victory. The other reason might be because the first two workshops were university education venues and the third was an education technology conference. The third was a positive match for the Generation Y group, who brought unbridled enthusiasm for new media and change. Universities, on the other hand, are slower to change. Academics tend to have a suspicion of education technology.

The predominant theme across the three conferences was the generational variance in the meaning of the word *technology*. In each of the workshops, Generation W, X and Y panellists and participants operationally defined technology as any process tool. They differentiated between low and high tech, classifying laptops, smartphones and tablets as high tech. The Generation Z panellist and the younger participants disagreed. They said that laptops, smartphones and tablets are not technology. The term technology was reserved for complex instruments and procedures, often with paraphernalia and equipment. For example, according to their definition, programming languages and rocket simulators are technology.


Some authors describe this phenomenon as “*a fish doesn’t know it is wet*”. The younger generations are surrounded in what the older generation call technology. Because the learners inhabit that technology, it is not salient or remarkable to them. It is ordinary and largely invisible. The younger workshop delegates repeatedly expressed that the older generations make *too much* of a deal over education technology, stating that universities should stop talking about it and get on with it.

In the first workshop, a Baby Boomer group responded to one of the questions with a YouTube video rather than a verbal presented response. The group delegate was so pleased with himself that he rested his palms on the panellist table, locking eyes with the Generation Z panellist and smiling broadly. There was an audible gasp across the room when this panellist held up a score of one (low) rather than the expected five (high). The facilitators asked the panellist why he awarded the group a one when everyone expected them to receive a five. He responded, “so what if it was a video, it didn’t answer the question”.

At the second workshop, the Generation Y panellist scored a presentation lower than the group expected. In response to the question – What technology did you use when you went to school? – the presenter said, “the teacher should use any technology that helps students learn”. The panellist’s tone indicated frustration with this response. He said, “that’s not good enough. You are the university professor, you can’t shoot off a line like that. It’s your job to know what technology improves learning and use it in your teaching.”

Later at the same workshop, a Generation W presenter explained his group’s opinion that the defining characteristic of today’s university students is a feeling of entitlement. He gave examples that students expect short turn-around on marked assignments and said that students want to know precisely what will be covered on the test. He said that students appear to see university as a right and not a privilege and that they perceive grades as contractual entities. In response, the university student panellist responded that he did not perceive the comments as misplaced or inaccurate. He replied that

the descriptions are true and that he did not find the depiction insulting.

The premise grounding the facilitation of the conferences and the collection, analysis and interpretation of data as a research project was that there is disconnect between university educator teaching and university student learning, because the vast majority of the professors did not grow-up with digital technologies, and the majority of the students did. This premise was confirmed by the workshops. However, the emerging explanation was not that there was a process gap between the technologies that professors were willing to use versus what students expected, but instead an attitudinal gap between the way in which professors and students define, conceptualise and position technology and the role of teachers and learners. In order to bridge this gap, it is proposed that more formal conversations take place between teachers and learners about their understanding of technology, school, university and each other. 

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Kayleen Wood is an education and curriculum design consultant. She develops and facilitates teaching and learning workshops for corporate entities and educational institutions. Her qualifications are in business economics, human resources and higher education... and yoga.

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