Learning from Digital Natives - Research with the Higher Education Academy

Starting point

An idea that gained currency is that the generation born after 1980 grew up with the Internet and there people are inherently technology-savvy. This generation has been termed Digital Natives, Millenials, or Net Generation. Proponents claim that, not only does this generation have sophisticated skills in using digital technologies, but that, through exposure to these tools, they have developed radically new cognitive capacities and learning styles (Prensky, 2001). The idea is that the education system is not equipped to accommodate the needs of this new generation of learners.   These arguments have been well-publicised and (largely) accepted with limited empirical basis.

This study provided empirical evidence to improve our understanding of the nature and extent of technology uptake by students. In parallel to understanding what tools students use and how they use them. The aim of this study was to build an accurate picture of the patterns and the contexts of technology adoption by students.

Method

The method combined quantitative and qualitative data collection across Social Work and Engineering students at two different universities. 160 students completed an online questionnaire. This quantitative data collection was followed by interviews of 8 students and 8 teaching and support staff.

Research Findings

Compared to 'digital immigrants', 'natives' used a wider range of technologies for learning. However, students have limited understanding of what tools they could adopt and how to support their own learning. Although students generally have expertise in the use of some (largely conventional) technologies that sometimes exceed lecturers' abilities, their understanding of how to use these tools for learning is limited by their knowledge of the potential affordances and applications of these tools and by their narrow expectations of learning in higher education. Students in the sample favoured conventional, passive and linear forms of learning and teaching. Their expectations of integration of digital technologies in teaching focus around the use of established tools within conventional pedagogies. These findings challenge the proposition that young people have sophisticated technology skills, providing empirically-based insights into the validity of this assertion.

Recommendations

1. **Encourage the use of social technologies in formal learning contexts**

When using tools for social networking outside the classroom, students engage in sophisticated information-seeking behaviours, in peer group collaboration and in the self-generation and the sharing of information and resources. The informal domain appears to be characterised by a world-view that emphasises decentralisation of authority (independence in learning), active participation, contribution and collective wisdom. HE institutions should embrace the idea that learning is about 'social participation' and 'meaning construction' and not just about delivery and acquisition. The starting point is a change in culture.

2. **Support students' skills in social networking**

Students who use social technologies for socialising may not have applied these skills in ways that support formal learning. It would be useful to build students capabilities in this area. One approach would be to redesign modules and programmes so that the use of social technologies and associated networking activities are integrated into classroom practices. This would require that members of academic staff are always up-to-date with technological developments. Another approach is to develop students' ability to apply social networking processes with digital technologies in formal educational settings:

for example, the skills to set up and use discussion fora, mobile devices, wikis, blogs and other social software for educational purposes. In this scenario, students themselves would choose which software and tools best suit the objectives defined by their academic programmes. The advantages of this approach would be students have control and it does not require that academic staff be experts across all areas of technology use and development

3. Rethink induction processes in relation to social technologies and formal learning

Universities often offer induction courses where students are trained in IT use. As each new cohort entering higher education came with more sophisticated skills, universities found less need for these courses. However, if students are to use social technologies for formal learning there may be a need to reinstate such induction courses but in a new guise. This is true whatever approach is adopted: i.e. whether staff integrate new technologies and social networking methods into courses and programmes or create opportunities for students to use their own tools. Students will need to be able to select the most appropriate technology/software for the learning task they are required to undertake. In rethinking induction, we need to reconsider whose task it is to provide programmes that foster these skills. It might require collaboration across support staff and academic teaching staff.

4. Devise assessment practices for 'learning as collaboration and participation'.

Effective use of social technologies requires that learning is viewed as a process of collaboration and participation rather than 'delivery of content'. This shift will raise specific issues for assessment. One concern is the responsibility for assessment. In this new context, students share responsibility for assessment with their teachers: they evidence their learning against criteria that have been agreed with the teacher rather than receive a score against predefined learning outcomes. Another issue is that, as assessment methods become more innovative (e.g. a wiki rather than an essay), marking and grading will become more complex.

5. Build a campus culture rich in social networking opportunities

A campus environment rich in social networking requires a cultural shift by both staff and students. One way to cultivate this shift is to foster communities both within and across stakeholders in higher education. Communities of academics could explore new pedagogies and technologies, communities of technologists might support developments in the technological environment, communities of students will learn and share knowledge but there should also be opportunities for these communities to interact and build new cross-interest communities. A cultural change of this kind will require support across different levels of the organisation (see next section). A starting point would be greater use of social technologies within the day-to-day work of institutions.

6. Build capacity in the use of social tools

Academic staff and students will require support in using social technologies. Staff development initiatives should bring together teachers, learners, and people with expertise in participative learning and digital media

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