



Why educators need to put their head in the cloud

by Travis Smith, National Manager - Expanding Learning Horizons

It has been a generation since computers were introduced into schools and over twenty years of one to one programs. In that time the world has changed significantly, particularly the way in which computers are used. Perhaps it is time for a generational change that will see schools move beyond the laptop and follow the world into cloud computing.

Schools continually strive to better prepare students for the life ahead of them. It is a challenge that inspires many educators and one that requires a continual evolution in schools. It is a great credit to the many schools that recognised in the 1980's the important role computers would play in the future of their students and proactively introduced them into schools. At that time computers were for programming and in the early days were introduced into the curriculum via maths classes. The extensive use of computers throughout the curriculum today is an indication of how far things have come. In fact a number of today's year 12 subjects are simply not possible without computers. One to one programs have also become the norm. All of these achievements are things that schools can rightly be proud of – but they also teach us that when it comes to IT we cannot rest on our laurels.

Developments in IT continue to change our world. Recent developments in tablets, smartphones, social media and collaboration tools are dramatically changing how we engage with information and each other. Behind these end point devices there have been other radical changes in the way information is stored, managed and shared. The internet continues to reinvent itself as its capacity to instantly connect anyone to anything anywhere in the world is extended in new directions.

These changes are rapidly expanding our Extelligence¹ and changing forever how we can best utilise our intelligence. In doing so it also presents new challenges to how schools, which have historically been the primary source of Extelligence, should adapt to this new paradigm. This is perhaps the greatest change to the sharing of knowledge since the printing press. It is a change which is recognised throughout the world even if its implications are not. Just as they did in the 1980's leading schools may join leading Universities in paving the way.

Schools would do well to look at the enabling technology as there is a parallel in the changing emphasis from intelligence to Extelligence in IT as well. The intelligence of the individual device (laptop), is now matched, if not surpassed, by the importance of its ability to access the Extelligence, (the Internet) available to it. This change in emphasis does not remove the need or importance of

¹ Extelligence is a term coined by Ian Stewart and Jack Cohen in their 1997 book *Figments of Reality*. They define it as all the cultural capital that is available to us in the form of tribal legends, folklore, nursery rhymes, books, videotapes, CD-ROMs, etc. They contrast extelligence with intelligence (by which they mean the knowledge and cognitive processes within the brain). Further, they regard the 'complicity' of extelligence and intelligence as fundamental to the development of consciousness in both evolutionary terms for the species, and also for the individual. 'Complicity' is a composite of complexity and simplicity and Cohen and Stewart use it to express the close and interdependent relationship between knowledge-inside-ones-head and knowledge-outside-ones-head that one can readily access.
Source: Wikipedia

intelligence, but it does fundamentally alter its role. The same is likely to be true for the individual student, or indeed school, in the way they participate in the broader learning environment that exists in the cloud.

This conceptual exploration of the future direction of education may benefit from some examples at this point. Educational institutions have traditionally valued intelligence, particularly applied intelligence at a premium. Indeed excellent educational results are almost synonymous with intelligent student. What if in this new paradigm Extelligence is more important – how then do we assess the relative merits of the student? Is it possible to contemplate an educational assessment in which the collective is more valuable than the individual? It is certainly the case in professional team sports where the individual performance is regularly defined in the context of the team. Businesses and Universities also require people to work in teams and collaborate remotely. Schools should also provide opportunities for students to collaborate outside of the classroom.

If schools are serious about preparing their students for their futures then getting their students into the cloud – conceptually and technically should be part of their agenda. It is certainly part of the IT agenda. In fact teachers and students may well be surprised at just how much of what they are doing is already operating in the cloud. From Mathletics in through to programs like Blackboard Collaborate and Desire-to-learn and many other applications in between cloud computing is now part of education. However the power to educate and prepare students about the possibilities cloud computing presents needs to go beyond this.

Shifting the emphasis from intelligence to Extelligence also changes the role of the teacher. Traditionally teachers have been sourcing and filtering Extelligence and trying to rebuild it as intelligence in the students. In preparing students for the new world the teachers need to teach how to access Extelligence, how to assess it, and how students can incorporate this new knowledge into their learning and world view. These skills will become the foundations of future success.

The cloud also provides teachers with the opportunity to address one of the worst performing areas of education – homework. The research on the poor return for effort of homework on educational outcomes suggests that it is the nature of the tasks given for homework that makes it so ineffective. By using a combination of collaborative tools like collaborative OneNote, Lync, and Skype, teachers have the opportunity to extend the students ability to think and work collaboratively beyond the classroom. This will not only better prepare them for the 21st Century it will also improve their educational outcomes.

Conclusion

Australia has a proud history of providing a powerful mix of tradition and forward thinking through its leading schools. To maintain their relevance into the future, schools must get their heads in the cloud and around the concept of Extelligence. It is a paradigm that will be the driving force of their students' futures.

About the author

Travis Smith

National Manager, Expanding Learning Horizons, AUS

Travis Smith leads a national team of education ICT specialists who work with schools to innovate their curriculum through the powerful use of technology. As a teacher of Psychology, Geography, History, a Director of Computing and also Deputy Principal at Frankston High School in Victoria, Travis has a thorough understanding of how schools operate at many levels. He has also lectured in the Education Faculty at Monash University and has presented keynote presentations and workshops at conferences around Australia and also in the US, South Africa and New Zealand on the use of technology in education. Travis and his team offer strategic planning services, 1-to-1 Program planning and designing and delivering professional learning programs for teachers.

“ Educational institutions have traditionally valued intelligence... excellent educational results are almost synonymous with intelligent student...what if in this new paradigm Extelligence is more important - how do we assess the relative merits of the student? ”

“ Shifting the emphasis from intelligence to Extelligence also changes the role of the teacher... the cloud also provides teachers with the opportunity to address one of the worst performing areas of education - homework. ”

