ENTERTAIN, ENGAGE, EDUCATE:
TEACHING IN THE 21st CENTURY
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Abstract

Students in our secondary schools today, are faced with a rapidly changing, technologically based world; a world of instant gratification and information overload. Generation Y and Z no longer need teachers to provide them with information and knowledge. What they do require are skills in flexibility, organization, the ability to make quick choices and ways to deconstruct information. They need to think creatively in their solution finding and they need the time, space and the tools to do this. The role of the teacher is evolving and the teacher who does not meet this challenge will lose credibility and the interest of their students

This paper discusses the research surrounding learners in the 21st century and develops a way forward, based on the behaviors being exhibited by our students in the visual arts classroom. It will look at the application of virtual space and new technologies in the making of art and explore a range of online applications that students can use to present their research work. Art lesson structures will be discussed as well as effective ways of providing feedback.

The use of free online resources that entertain, engage and educate will be covered and teachers will be given practical and relevant information on ways to apply these resources in their classrooms. Examples of the application of these technologies will be provided using work that students have produced.

Introduction

With the move in Australian schools to adopt a 1:1 computer policy, the need for all teachers to look at using technology and virtual space to engage millennial students has never been more relevant. In 2001, Marc Prensky penned his “Digital Natives, Digital Immigrants”, a paper outlining the learning style of a computer literate generation. Prensky argues that

Digital Natives are used to receiving information really fast. They like to parallel process and multi-task. They prefer their graphics before their text rather than the opposite. They prefer random access (like hypertext). They function best when networked. They thrive on instant gratification and frequent rewards. They prefer games to “serious” work.

Whether this is true of all 21st century students may be debatable but the fact remains that students are using technology for entertainment and communication at ever increasing rates. Teachers cannot afford to ignore the technological revolution that has been, and is still, happening.

Who are the Millennial Generation? How are they acting in the classroom?

The current group of students, those born between 1982 and 2004, has been classed as Millennials. (Strauss & Howe, 1998.) Others have called them Generation Y and Z. Teachers are observing in the classroom a set of characteristics shared by the majority of this group, specifically 14 to 16 year olds:
middle years students are electing to do Visual Arts subjects for entertainment, as a career path or both;

they do not want to hear the teacher talk for too long;

they like the teacher to get to know them and what they want to do;

they will question why they are doing something;

they do not like repetitive work, unless they can see the reason for it, (look at the online games they play);

they are great scanners of information;

they can multitask;

they use their computers to play games as much as possible and this will include in class time;

they will text, email, facebook, tweet, again as much as possible and in class time;

some will struggle with technology but this is happening less and less;

they can teach themselves to use software programs;

they will teach each other;

they work more effectively in a group with one computer rather than on their own;

their interest in photography and video is wide spread;

they get bored easily;

they are happy to teach their teachers.

Research on the use of e-Resources as a form of student engagement

The range of ubiquitous e-resources available to teachers is vast and somewhat daunting, with little evidence of what actually does engage students. However, there are some explicit examples based on actual research that provide a starting point. One such example of this was the Minimally Invasive Education (MIE) pedagogy that was developed and documented by Professor Sugara Mitra from Newcastle University in the UK. (Mitra, S. and Rana, V. 2001) Known widely as the ‘Hole in the Wall’ study, it challenges the need for students to be formally instructed in the use of technology. This encourages teachers to explore the wider use of online applications with their students in the classroom without needing to be ‘experts’ in them. Classroom observations show that students are more than happy to explore the possibilities and teach their teachers. Mitra (2010) also observed that once students are engaged, they will teach themselves what they want to know and they will teach each other.

Yet another reference to the use of e-resources occurs in a paper presented by Ken Williams from the Marzano Research Institute at the Morehouse College in Georgia in 2011. He referred to the institute’s research on student engagement. One of the four ways discussed to tap into a student’s
personal goals was the use of technology. A range of online examples were cited in his paper. (Williams, 2011)

A third such example is found in the work of Marco Torres. A secondary school teacher and consultant to Barak Obama, he has a motto of “stay curious + stay hungry + be creative”. His use of video technology together with free online resources and the use of iMovie to engage students is well documented on his website. (torres21) Torres argues that teachers need to learn to use the tool of technology more effectively and that we live in a time, where students are just not recipients of information, but need to be producers of content. (Torres, 2009) Kids want to share and showcase their ideas and what they are learning; the stage is greater than the four walls of the classroom. Teachers need to be tapping into cyber space and working in the “space” that the students inhabit daily.

Another approach, that has been effectively used by business executive turned elementary school teacher, Ananth Pai, has been to use games with his students. With the aim to improve literacy and numeracy skills, he conducted and documented pre and post tests. These results showed strong evidence that using the correct technology has a significant effect on a student’s interest and consequently their learning. (Pai, 2011)

Pedagogy Research on student engagement

Technology is a tool, like a pencil, and needs to be underpinned by solid educational principles. In the last decade, several extensive studies have been conducted using data to formulate a list of factors that affect the improvement of a student’s performance. The Marzano Research Institute in the States (2012), Shirley Clarke from the UK (2012); and John Hattie, who is based in New Zealand (2009), have all produced quantitative research in this area. For teachers, dealing with students on a daily basis, the relevance of this information needs to be reviewed in the light of what is observed. “When teachers stop talking deep learning takes place”. (Hattie P. J., 2011) Professor John Hattie advocates the need for teachers to reduce the amount of time they spend talking at students in their classrooms. He believes that when teachers stop talking deep learning is able to take place. His research indicates that 80% of many classes is spent in teacher talk. Hattie’s research also examines the things that make the most difference to the learning of students. Feedback is at the top of the list. His research also indicates that 40% of what students are being taught, they already know. (Hattie J., 2009)

Michael McQueen in his writings on “The New Ways of Engagement” (2007), discusses the importance of building a relationship with the student; not only teachers understanding the student in terms of who they are but also in terms of what they know. “Matrix Learning”, a term coined by McQueen, “aims to highlight the relevance and connectedness of learning”.

The Millennial Generation needs to see the relevance of what they are doing in relation to the world in which they live. Technology is one way of tapping into this need. We can glean from McQueen’s writings that when teaching students we need to be very clear about the expected outcome and flexible in the processes students use to achieve these outcomes. McQueen also stresses the importance of “affirming” the student in the learning process. The issue of the ‘granny factor’ (Mitra, 2010) is when enthusiastic encouragement is given liberally and often to the discoveries being made by the students. Mitra used unskilled surrogate ‘grandmothers’ to provide this encouragement in his research. Both teachers and parents are fully aware of how positive encouragement is to students. This reinforces Hattie’s view (2009) on the importance of feedback.
Communication and Learning

Mitra discusses the use of Self Organised Learning Systems (SOLS) in his “Hole in the Wall” presentation. (Mitra, 2010) In this approach students organize themselves into groups around a computer and proceed to solve given tasks. Although the cooperative learning model has been around for a number of years, it has been interesting to see it applied in this ‘personal computer’ age. Undoubtedly if students are given the opportunity to work cooperatively around one computer, a culture of shared learning will occur.

The research discussed indicates that the old established pedegogy of a quiet classroom with each student working individually on a given task must be replaced for the 21st century learner. This paper suggests a noisy classroom should be an indication of a spirited exchange of ideas and a cooperative learning space.

Pedagogy underpinning Technology

Extensive information on this Millennial Generation tells us that engagement via traditional teaching practices, where the teacher is delivering information to the student, is simply not working. This is evident in the classroom. Ways to engage students, deliver content and feedback need to be reviewed in the light of available online resources. In a sense, a teacher needs to have a ‘box of tricks’ from which they can produce a variety of different strategies to tackle a lesson. Technology is one component of that box. Through using pedagogical research, plus, classroom observations and experiences, we have developed the following list of ways to use e-resources:

- use Technology to know your student;
- use Virtual Space to engage and entertain as part of the learning process;
- use Technology to deliver content and skills (less teacher directed);
- use Technology to help students develop ideas;
- use Technology to provide feedback;
- explore “Publishing and Sharing” using Technology.

Using online resources in the classroom:

One issue that has arisen with computers in the classroom is the teacher’s reliance on formal approaches to teaching. The use of technology, solely as a word processor, and for internet research, is resulting in the disengagement of the learner. It can be argued that teachers do not have the time to review and become ‘expert’ at using many of the Web 2.0 tools before introducing them to their classrooms. And whilst, Mitra (2010) suggests this is not necessary, there is, however, a growing need to provide teachers with a range of ways to use these e-resources. Due to the breadth of ubiquitous agents and the time needed to find suitable ones, teachers more than ever require access to resources that have been proven to be effective. Until this is done, it appears most teachers will not look to incorporating technology creatively in their programs.
What’s out there for the teacher of visual arts?

The following suggestions do not involve the purchase of expensive software:

- **Use Technology to know your student**
  There are several suitable sites to do this but one that has proved effective in the classroom has been VOKI.com. Students are able to create a simple ‘avatar’ and use this to tell their teachers and peers about themselves. Using an avatar improves student self confidence and they share more about themselves.

- **Use Virtual Space**
  To engage and entertain as part of the learning process. It isn’t difficult to find a program to entertain students. Any student can tell you of an online game. Finding an educational tool that entertains requires the teacher using the tool as the students use a gaming site. One example is the Gif sites of which there are many. These sites are similar to traditional zoetropes, however, the speed of delivery can be altered by the user. Teachers can use this technology to stimulate the pupil’s visual memory and provide opportunities for their class to create images that can transform and morph.

- **Use Technology to deliver content and skills**
  If you are trying to teach students a process or technique, let them video you doing this and then place it online so they can refer to it whenever they need to. If it is a computer based skill, use Jing. It will give you 5 minutes of screen capture recording with voice over to explain what you are doing and creates a flash file.

- **Use Technology to help students develop ideas**
  Again there are numerous sites that could be used for this topic. However, two user friendly programs are Artweaver.de and GIMP 2.6. Both are photo- editing programs but allow for creating Art and Design ideas, using a range of 2D art mediums such as colour pencil or conte. The screen interface of Artweaver is similar to more expensive software such as Photoshop.

- **Use Technology to provide feedback**
  Teachers need to be looking at providing feedback often, in detail and individualized. Dr Robert Marzano, in his model of school reform for Lindsay Unified Schools District, California proposed that teachers do this every two weeks. (Marzano, 2009) Teachers need to look to simpler and more effective ways of providing feedback and technology is providing opportunities for this to be done. The screen recording resource, Jing means the teacher can report to the student. ‘Hot Potatoes’ enables the teacher to set up quick crosswords, multiple choice and cloze activities that enable you to quickly check for student understanding. This software marks the student’s responses and records the number of attempts a student takes to get the correct answer.

- **Explore “Publishing and Sharing” using Technology**
  For a generation that is “connected”, not using online sharing of ideas and work is to ignore one of the greatest opportunities for student engagement. Websites such as The Art Room 2.0, Flickr and the ACMI site, 15 second place, all provide spaces for students to post their work. Linoit allows students to discuss their and other’s artworks. Edmodo brings together communities of students in cyberspace, providing a sharing and working space to develop ideas.
Summary

Where does the teacher go from here? The World Wide Web hosts many sites that showcase links to e-resources, however, most lack a solid educational basis. Educators require well organized online spaces, ones that document the best e-resources, ones that show evidence of engaging students’ interest. The list needs to be extensive and constantly reviewed. Millennials will not stand still in their use of and passion for technology. Teachers must not either. Teachers cannot afford to become complacent about the importance of engaging their students in the use of technology. It is the educational tool of 21st Century.

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