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INTRODUCTION

New times for learning

The increasing presence of media and digital technology plays a key role in many aspects of our daily life. Computers, video games, internet and mobile devices are essential tools to communicate, share, consume and create knowledge. All these technologies significantly affect the development of our social, cultural and educational skills, i.e. the way we interact, play, work, study or solve problems.

One of the dimensions of daily life deeply affected by digital technology is time. As David Harvey[1] points out, developments in the speed of technological processes, including technologies of communication (telegraph, telephones, fax machines, internet), travel (rail, cars, trains, planes) and economics (new markets, speed-up production cycles) resulted in a "time-space compression". This has radically changed the way the majority of us experience the world. Following that path, a diverse range of thinkers such as Stephen Kern, Manuel Castells, Pierre Lévy and Andreas Huyssen have been improving our understanding of social experiences generated by new technologies, and how they affect our relationship with time and space.

Experience of time and technology also has an important impact on learning. The drastic reduction in lifetime of knowledge, connected with the overflow of information and fragmentation of sources, are just some of the features that are changing the way we learn. This situation challenges us to think more creatively about the interaction between communication technologies and learning, and to explore how our educational models are being impacted by the processes of social change that come with digitalization, the emergence of social media and the web 2.0.

Since February 2011 the group ECO (Education & Communication), driven by teachers of Information and Communication Studies at UOC, has been providing a forum for researching communication and learning, and for sharing teaching innovation through e-learning environments based on collaboration, creativity, entertainment and audiovisual technologies.

The five articles in this edition of eLC Research Paper Series reflect the short but intense trajectory of the group. Some of them are a selection of papers presented at the International Conference BCN Meeting 2012, organized by ECO. The other articles were written specially for this issue by members of the group and give a picture of the themes and questions we are now exploring.

Breaking boundaries in entertainment and learning, written by Lluís Pastor, belongs to this second group of articles. Pastor discusses one of ECO's research interests: the role of entertainment in the

1. Harvey, David. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Cambridge, MA: Blackwell, 1990.

improvement of students' motivation in learning. His article contributes to a deeper understanding of conflicting theoretical arguments that have historically placed entertainment beyond the boundaries of valuable learning.

In *Digital Literacies for Engagement in Emerging Online Cultures*, Steve Wheeler points out that we are living in a period of technological advancement that is both unprecedented and widely disruptive. The author invites us to think about how new media and digital technologies offer opportunities for learning and how the disruptive nature of the internet requires us to conceive an entirely new set of literacies.

Amalia Creus and Ferran Lalueza offer an approach to another group interest: teaching and learning innovation. In *Learning through professional environments: The ComCity project*, the authors present UOCom, a virtual communication agency designed to implement professional practices in e-learning contexts. It is a 2.0 platform where students and teachers work as a team, developing real communication projects for non-profit organizations.

Still in the field of teaching innovation, in *When time is running out: e-students under pressure with the UOC Kronos application*, Sílvia Sivera-Bello shares the results of an original innovation project which enabled the creation of a web application for carrying out time-limited exercises. This paper analyses the results of its implementation in the Creative Thinking & Writing course of the UOC Degree in Communication.

Finally, in the border between reality and simulation, *Real-Time Political News: Designing information flows in an online scenario* by Mary Griffiths discusses how access to public information has broadened, and how web 2.0 technologies have impacted on speed, transparency and accountability in journalism and political practices. The author presents a case study based on an educational-blended scenario that replicates flows of political information run by students from the University of Adelaide.

Digital technologies are causing dramatic changes in the way we learn. Both the abundance and disorder of information are impacting on the process of knowledge production, transforming the value of time and the meaning of learning. These are new times for education: times that challenge us to find new answers to old educational problems and invite us to ask new questions. This is what we address in this special issue.

Sandra Sanz and Amalia Creus

Lluís Pastor (2012). Breaking boundaries in entertainment and learning. *eLC Research Paper Series*, 5, 06-13.

BREAKING BOUNDARIES IN ENTERTAINMENT AND LEARNING

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Breaking boundaries in entertainment and learning

ABSTRACT

As societies change from industrial-based to knowledge-based economies, individuals are increasingly accessing lifelong and free-choice learning. In this context, entertainment – particularly media entertainment – provides an important source from which people can acquire information, develop ideas and construct new visions for themselves and their society. This paper seeks to explore the connections between education and entertainment, and contribute to a deeper understanding of conflicting theoretical arguments that have historically placed entertainment beyond the boundaries of valuable learning. By researching the mechanisms of pleasure and attraction of mass media, the paper suggests that the very nature of entertainment evokes optimal conditions to encourage engagement in learning, and indicates the need for further research in this area.

KEYWORDS

entertainment, mass media, engagement in learning, social cognition

COMMUNICATION AND LEARNING IN AN ENTERTAINMENT SOCIETY

Mass media take up much of our leisure time and the time we devote to understanding the world. Through mass media, we learn, stay informed and are entertained. But despite the undeniable role that resources such as television, the internet and digital games have in building and sharing knowledge, entertainment is still a problematic concept from an academic perspective.

This article begins with a necessary review of the connections, interactions and separations between education and entertainment at a time in history when entertainment has become the driving force behind many everyday communication processes. In this context, I consider it essential to understand the main pleasure and attraction mechanisms employed by the mass media, and to rethink them in terms of cognitive strategies so that they may spark the interest and involvement of students in formal learning processes.

The key to the new information society is that it is an entertainment society; only as such can we understand the new role of information and the conversion of any person and institution into a comprehensive communication node (transmitter-receiver) in the network society. In this regard, I will use the concept coined by Manuel Castells (2005) and attempt to explain its implications from an entertainment perspective. In this network society, every transmitter or node struggles to draw people's attention. And only the most engaging and entertaining messages reach their target audience, because the inflation of information leads people to apply a kind of communication Darwinism. Thus, for the first time in the history of mankind, there is no dichotomy between work and entertainment, as entertainment becomes the primary persuasive strategy for any serious communication (Bernstein, 1990).

To assess the significance of this change, we should keep in mind that, historically, entertainment has had a bad press (Singhal and Rogers, 1999) and that criticism of entertainment increased with the creation in the 20th century of the entertainment and mass media binomial. Guy Debord (1967) wrote a work that has become a benchmark for the harbingers of decline, *The Society of the Spectacle*. In his book, Debord argued that the spectacle is the dominant model of social life and blamed the mass media for procuring products that are far removed from what is really happening in the world. On the other side of these representations, Debord places the citizens-viewers who passively accept the messages they are offered. In his work *The Consumer Society*, Baudrillard (1986) exposed what he called the "playful way", which he defines as a persuasive form of superficially drawing attention to certain objects and is contrary to passion as the absolute interest in any event, object or person. Debord and Baudrillard are symbols of the modern mainstream Western way of thinking that has discredited entertainment as a source of knowledge and as a vehicle for obtaining new knowledge.

Compared to the number of harbingers of decline, entertainment advocates have always been a minority. Among the earliest references are the contributions by Walter Benjamin (1973), who emphasised the democratising possibilities of the industrialisation of culture. In recent decades, Bell (1969) and Shils (1974) advocated mass culture and even stressed the educational role of mass media. David Morley (1992) argued that the mass media consumer is an active spectator, thus offsetting Debord's theories and anticipating the current findings of neuroscientists. Morley also defended TV entertainment as a bearer of messages on

society. From this perspective, no programme simply entertains; they all convey a certain view of the world. For the same reason, many authors who analyse the role of the mass media are against the dichotomy between entertainment programmes and educational programmes (Fischer and Melnik, 1979; Singhal, 1990; Singhal and Rogers, 1989; Singhal and Rogers, 1999).

The defence of entertainment coincides with the defence of the social function of mass media, but it is nonetheless a minor current in the history of ideas. Entertainment has traditionally been seen as something that is unnecessary. Entertaining has etymologically been regarded as a way to pass the time: time not spent at work, since the time spent at work cannot be regarded as "entertaining". And thus, entertainment has been identified with leisure time, which is also unfortunate because leisure has not been well regarded in Western history either and leisure time spent unproductively is destined to be discredited.

From this point of view, entertainment becomes a specific aspect of leisure and therefore leisure and entertainment are set against work and domestic concerns. In establishing these dichotomies, and setting entertainment up against work, entertainment is defined negatively in the modern day (Dyer, 2002). When set up against work, the central occupation in life, entertainment, like games, becomes superfluous (Huizinga, 1972).

But entertainment's bad reputation is not only a result of its clash with work time: it was also destined to lose in its confrontation with art. In this case, when art is confronted with entertainment, artistic expressions are considered to be of a higher order than expressions that only seek entertainment. This idea is deeply ingrained in our society, where works that provide entertainment are poorly considered compared to those deemed artistic. As suggested by Professor Richard Dyer (2002), entertainment has been identified as something that is not art and is neither serious nor refined. This distinction affects any current discussion regarding what is art and what is "merely" entertainment. According to Dyer, art is considered refined, elitist, uplifting and difficult, whereas entertainment is overly vulgar and simple.

Perhaps it is the implicit simplicity of entertainment that has condemned it. Entertainment cannot add to the degree of difficulty in its approach if it aims to be useful to a large number of people. And because it reaches many people, it is considered vulgar. Such is the crime of entertainment: to defend the idea that the principle of communication is at the core of any human production and that to get through to the public is worthy of praise rather than criticism.

Other variables may have a negative impact on the concept of entertainment in the eyes of those who set the rules. One element of demerit of entertainment derives from another dichotomy, one that confronts rationality and emotionality. Entertainment has an emotional component that has discredited it.

But beneath this layer of contempt, entertainment hides an attitude. Those who identify entertainment exclusively with certain topics are quite possibly mistaken. One of the keys to entertainment, as asserted by Professor Dyer (2002), is that it is best explained as an attitude: entertainment is not a category of things, but rather an attitude towards them. In other words, entertainment activates a series of cognitive mechanisms that inevitably attract us to it. Arousing such an attitude, which to some may appear to be simple and vulgar, happens to be the goal of any successful communication, be it one that aims to convince us to vote for a certain candidate or one that teaches us something we did not already know.

WHY DO MASS MEDIA ENTERTAIN US?

I believe it is important to question why the internet, mass media and games attract and entertain us. Marc Prensky (2007) responds to the question of why we are attracted to games in his book *Digital Game-Based Learning*. He says that games are a means of having fun: through games, we discover an intense and passionate link; they have rules, which provides structure; they have goals, which provides motivation; they are interactive, which allows us to act; they have consequences and provide feedback, which allows us to learn; they are adaptive and our skills grow with them; they enable us to win and feed our ego; they present conflicts, competitions and oppositions, which raises our adrenaline levels; they require us to solve problems and spark our creativity; and they require us to interact in social groups.

According to Prensky, it is normal for us to get caught up in games since they trigger multiple poles of attraction. Each of the features that make games a source of attraction and entertainment may well also apply to the mass media if we consider them in full: without limitations regarding format or channel (press, radio, television and internet) and devoted to both information and fiction. News, contests, magazines, series, documentaries, reality shows and sports programmes develop capabilities similar to those identified by Prensky in games. Thus, games, programmes and mass media contents become sources of attraction and entertainment that are difficult to surpass. In fact, the mass media take up much of the time we devote to leisure and understanding the world.

It is not difficult to ascertain which TV shows attract the largest number of viewers. Indeed, audience analysis is central to the television industry, since adverts cost more when shown during programmes with high ratings. In Spain, Sofres is the company that conducts audience analyses of television programmes. Studies provided by Sofres indicate which programmes have the highest ratings of the year, the date they were shown, how many people watched them and their share (the percentage of people who watched them compared with the total number of people watching TV). To determine the programmes with the highest ratings and the variables that lead people to feel attracted to these programmes, I analysed the thirty most watched programmes of 2004–2007.

In 2007, seventeen of the thirty programmes were sports competitions (the majority), eight were episodes of the police investigation series *CSI*, two were episodes of the comedy series *Aida*, two were programmes in which citizens ask political leaders questions (*Tengo una pregunta para usted*), and one was the Christmas special *Navidad Shreketefeliz Navidad*.

Of the thirty most watched programmes of 2006, with at least 5,729,000 viewers each, twenty were sports competitions. The remaining eight were distributed as follows: seven were episodes of the series *Aquí no hay quien viva* and one was an episode of the series *Hospital Central*.

Of the thirty most watched programmes of 2005 (with up to 6,811,000 viewers), fourteen were episodes of the series *Aquí no hay quien viva*, ten were sports competitions, two were episodes of the series *Los Serrano*, one was an episode of *Cuéntame cómo pasó*, another of *Aida*, and two new shows joined the list: the reality show contest *Operación Triunfo* and the New Year's chimes.

Of the thirty programmes with the highest ratings in 2004, with at least seven million viewers, twenty-three were episodes of series and seven were sports broadcasts (six of which were among the top ten). The most

watched series were *Los Serrano* (with thirteen episodes), *Aquí no hay quien viva* (with nine episodes) and *Cuéntame cómo pasó* (with one episode).

The analysis of the most watched programmes in Spain from 2004 to 2007 reveals that a small number of programmes accumulate large viewer numbers. They are basically sports broadcasts involving Spanish sportspeople, police series, sitcoms that depict the social reality of Spain, programmes that combine contests with a reality show format, such as *Operación Triunfo*, and specials that have become TV classics, such as the New Year's chimes or the Christmas special.

FIRST HYPOTHESIS ON THE PRINCIPLES OF ATTRACTION

From the analysis of the most watched programmes on Spanish TV networks, I venture to advance certain principles that might explain why we are attracted to these prime time shows. My goal is to propose a set of cognitive mechanisms that explain why certain shows attract more viewers than others. The aim of this analysis has been to reveal some basic mechanisms of attraction, along with the findings by cognitive scientists and neuroscientists, which allow for some initial explanations regarding the mechanisms that lead us to be attracted to certain programmes.

Sports broadcasts activate three distinct mechanisms: the public's identification with the protagonist (sportsperson or team), surprise (no knowledge of the result and a continuous projection of the possible outcome) and contrast (excitement related to winning or losing). Moreover, the identification mechanism increases the flow of emotions in the public. Three more mechanisms should be added: intrigue (a plot that leads to an unexpected outcome), clarity and repetition.

Let us go over the six basic mechanisms, beginning with the contrast mechanism (Renvoise, P.; Morin, C., 2003). The contrast mechanism is based on the brain's ability to identify reality more easily by comparing opposites. We feel good or bad according to a contrast which in sport is channelled through victories and defeats. Winning or losing is the most obvious contrast. The chance of winning – of our team winning, of our favourite athlete coming in first place – irresistibly draws us in.

There are multiple ways of presenting us with contrasts in TV shows. It is not only sports that involve winning or losing: voting systems in contests or reality shows are based on the same element of attraction.

The contrast mechanism leads to a second, more complex mechanism: identification. In the case of video games, the identification mechanism is even more evident as players take on the form of a screen alter ego, an avatar, with which they are immersed in an adventure (Gee, 2003). Identification with the protagonist of a story is one of the most attractive cognitive mechanisms. This is clear in the case of video games, but we can trace this identification in any story, regardless of its format. The instant there is identification between the person who is told a story and its protagonist (or one of its protagonists), the attraction is enhanced. This identification is what causes the subjects' emotional response to fictional realities (Redolar, 2009).

Another principle that makes these programmes attractive is that of repetition. Repetition reassures the public into thinking that things will occur as usual. Repetition also allows the public-pleasing elements to be established, through facilitating them repeatedly. As stated by the neuroscientist Ignacio Morgado, "the conclusion is that most people prefer what they know and are wary of uncertainty" (2007: 110).

The principles of discovery and surprise respond to the same cognitive mechanism. The difference is that with the discovery principle, the public is given a narrative that has been decided in advance (an episode of a TV series, for example); there is no initial plot with the surprise principle, according to which a series of unforeseen but possible events occur (such is the case of a sporting event, for instance). This cognitive principle is in line with the explanation offered by neuroscientists regarding mirror neurons (Rizzolatti, 2006).

Finally, the mechanism of clarity attracts because what these programmes show can be easily understood. The programmes that garner such high ratings are designed to be understood.

The cognitive mechanisms triggered by entertainment draw the public's attention, and this involves controlling communication. The new information society is actually an entertainment society because communication is the most important phenomenon of our society. And entertaining is a complex exercise that allows everyone to be a transmitter and to reach their audience. In this regard, the historian Johan Huizinga (1972) provides a new framework of analysis: entertainment is something that certain people prepare to capture the attention and time of others. It is a biased activity, because if we look at its etymological root, entertainment has to do with capturing, or occupying, time. Thus, entertainment aims to occupy other people's time. Not only that: it aims to steal time from other people with their permission, and in exchange it gives them back more than what they would have had if they had not accessed it.

Entertainment also synthesises a series of techniques that can be applied to any area of human life in which communication is vital. These communication techniques aim to catch and hold the attention of the public and stir a discussion and positive sentiment about that communication.

Furthermore, entertainment uses these communicative techniques to democratically disseminate content, knowledge and emotions. The same features that made entertainment vulgar and simple may be considered useful for making the information society more democratic, as entertaining is a means of making contents more democratic in that they reach more people, more people can share their opinions and social dialogue is strengthened. Entertainment helps to make content appealing and understandable to a wide audience (Dyer, 2002).

Moreover, entertainment is based on a radically free activity, perhaps the freest of all, since it cannot be mandated. Entertainment is dispensed through an activity that is chosen freely by the public. The basis of entertainment is that the public – the receiver – chooses what it wants to see and has all the power in this communicative situation. Entertainment is a noun with which the receiver labels a reality, it is not a descriptor decided by the issuer. Thus, an activity is entertaining if the recipient considers it to be so (Huizinga, 1972). Applying entertainment to work and education is a communicative derivative of the new information society, where the receiver has as much or more power than the issuer.

ENTERTAINMENT AND EDUCATION: OPPORTUNITIES AND CHALLENGES

To be able to speak of the link between entertainment and education, we must consider a previous step: the relationship between education and the mass media, as entertainment reaches education through the media. Although the theoretical debates on communication and education began to emerge in the second half of the 20th century (Aparicio, 2010), projects that

linked media and education were already being carried out in the first half of the century. One such project was the school newspaper created by Freinet (Kaplún, 2010).

More recently, there has been a growing concern to incorporate entertainment into learning. Gitlin (2003) argues that it is possible to gain knowledge and learn while being entertained through immersion in sights and sounds, a situation that is typical of media consumption. In addition, new student profiles and the use of video games (Prensky, 2006; 2007) have helped to expand the concept. The neologism "edutainment" has generated a natural semantic field in which education and entertainment are combined. In this sense, although there are some theoretical contributions of value regarding the definition of the "edutainment" concept (Garrett and Ezzo, 1996, delve into the cognitive mechanisms that are set in motion when learning while being entertained, while Okan, 2003, analyses the necessary multimedia resources), the fact is that the literature has often linked "edutainment" to software solutions applied to learning. Given this reductionist view of entertainment in education, this article argues that entertainment is a substantial element in the learning process.

Only education that is attractive and consistent with new uses and social interests can become a means for improvement throughout the life of a 21st century citizen. We must dare to say out loud that the learning process should arouse enthusiasm and interest and be entertaining (Prensky, 2007; Pastor, 2010). The challenge will be to bring the worlds of education and entertainment together. The advancement of our knowledge and skills must now be stimulated, just as our leisure time and our consumption of goods and services are (Pastor, 2010).

The media, the internet and video games are the best tools for bringing education closer to entertainment, since their true essence is entertainment, which is why they are valued and used (Forney, 2004; Gros, 2007). After all, the studies on media consumption show that all citizens spend a significant portion of their time on traditional media, the internet and computer games (Muzet, 2006).

Only an attractive education that is consistent with new uses and social interests can become a resource for improvement throughout the life of 21st century citizens; and only education that is integrated in daily life can become an accessible element for these citizens.

If the 21st century requires an economy different from that of the 20th century, if the new century requires a society geared not only toward production but also toward reinvention, research and development of new products and services, then education must take a new leap forward toward lifelong availability, interest and attraction. Lifelong education is equivalent to personal R&D and the basis of education must be modified for this programme of innovation and development to be implemented.

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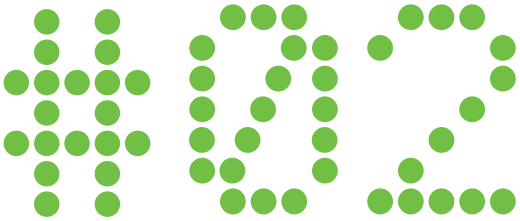

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DIGITAL LITERACIES FOR ENGAGEMENT IN EMERGING ONLINE CULTURES

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Digital literacies for engagement in emerging online cultures

ABSTRACT

We are living in a period of technological advancement that is both unprecedented and widely disruptive. Rapid transitions from the previous ages of centralised traditional publication and broadcast media to the present day digital participatory media has been surprising for many especially those working in education. Many things have changed, including the design of computer interfaces, the processing speed and portability of devices, the accessibility of information and knowledge, our methods of communication, the maintenance of our relationships, commerce, the protection of personal privacy, creative processes, publication of content, and the emergence of new digital tribes and virtual clans. In schools, colleges and universities, change is being promoted that is profound and wide reaching. This paper discusses these changes and exposes some of the issues, challenges and opportunities we now need to meet as professional educators.

KEYWORDS

digital literacies, disruptive technology, social networking, transliteracy, online learning

INTRODUCTION

We are witnessing a period of technological development that is both unprecedented and widely disruptive. The rapid transition from an age of centralised traditional publication and broadcast media to the present day digital participatory media has taken many by surprise. The social web has spawned a dynamic and emergent spectrum of virtual cultures, social mores and online practices. In the short time since the Internet has existed, much has changed, including the design of computer interfaces, the processing speed and portability of devices, the accessibility of information and knowledge, our methods of communication, the maintenance of our relationships, commerce, the protection of personal privacy, creative processes, publication of content, and the emergence of new digital tribes and virtual clans (Wheeler, 2009). The music, movie, broadcasting and publishing industries have all suffered significant revenue losses (Lessig, 2005) as a result of the significant shift from 'atoms to bits' predicted nearly two decades earlier by Negroponte (1995). Even the long established dominance of the telephone company is being eroded by web services such as Skype (Godin, 2008). Most significantly, the digital age has been responsible for a disruption of the traditional learning paradigm, ensuring that the self-help 'learning webs' theorised by Illich (1970) have become a reality. Moreover, the open democracy unleashed by new social media has fomented an erosion of the oppressive pedagogical practices redolent of traditional education (Freire, 1993). Living and learning in a digital age brings many opportunities but also many challenges.

DISRUPTIVE TECHNOLOGY

The argument I wish to pursue here is that new media and digital technologies offer new opportunities for learning yet the disruptive nature of these tools and the seismic changes they bring require us to conceive an entirely new set of literacies. We are not solely concerned with skills or competencies, but by a far deeper form of cultural engagement, and hence I use the term 'literacies'. I am not simply expressing my own views. This paper also reflects the views of many other commentators including Lea & Jones (2011), Beetham *et al* (2009), and Lankshear & Knobel (2006) who acknowledge that the exponential changes that are occurring require new responses. Essentially, the skills and competencies that have dominated higher education are now considered by many to be inadequate in the face of the rapid proliferation of social networking services, mobile technologies and pervasive computing, but should be transformative (Beetham *et al*, 2009). Our comfortable practices are being disrupted by new technologies, and it is expedient that the teaching profession responds positively to this disruption by developing and mastering new ways to cope with the changes and challenges to which it is exposed.

Several recently published articles, both in conventional paper based mode and online, have explored the notion of 'digital literacy', and as expected, there are diverse views. Anderson (2010) for example, defines digital literacies as the ability to exploit the potential of computer technologies. Literacies, in all their forms, are at once cultural, social and personal (Kress, 2009) and enable us to interact fully in specific cultures. Some warn that without an adequate level of literacy, digital media have the capacity to disadvantage some (van Dijk, 2005), whilst others warn of the nature of the web to undermine knowledge and competency (Carr, 2008; Keen, 2007). However, the overwhelming majority of commentators eulogise over the potential of the social web to liberate education, and democratise learning, with the caveat that digital literacies are practiced.

I use the term 'digital literacy' here not to describe skills, but rather as an alignment to the argument that as we engage with our own specific culture we acquire and develop much more than skills. If I am illiterate (in the sense of reading and writing), I cannot read the signs or engage with text and therefore I am not able to fully participate within my culture. If I fail to apprehend the meaning of something because of that illiteracy, I won't know what I don't know. Further, literacy allows us to develop a critical self-awareness of not only the symbolic nature of our world but also the processes of personal learning (or meta-cognition) and in so doing we build what Bourdieu and Passeron (1970) termed 'cultural capital'.

When I learnt to drive in England, I learnt a set of skills and competencies that were culturally specific, and complied with the written and unwritten rules of driving on the left hand side of the road in the United Kingdom. Transferring those skills to driving in France or the USA was at first problematic, because the formal rules for motorists (and in the case of France, also the language) were unfamiliar territory and the unwritten rules were particularly difficult to assimilate.

Similarly, the informal rules of online communication – sometimes referred to as 'netiquette' – can be alien to those first entering the world of the internet, but with habituated use, are eventually assimilated as literacies.

In this paper I will offer a brief exposition of nine of the key digital literacies I have identified from my own extensive engagement with, and immersion within, online culture. This is not an exhaustive list, it is yet to be fully defined, and given the previously published work, there may be significant overlap with those identified by others. But for me, the list below constitutes a road map which I have already used to enable me to develop themes and topics within the modules I teach to help students to maximise their learning potential using new and emerging technologies.

- Social networking
- Transliteracy
- Maintaining Privacy
- Managing Identity
- Creating content
- Organising and sharing content
- Reusing/repurposing content
- Filtering and selecting content
- Self broadcasting

SOCIAL NETWORKING

For those engaged in online culture, one of the cardinal digital literacies is the ability to effectively exploit social networking services. Why is this so important? Surely we are all very familiar with social networks? Most of us have a Facebook account, or maybe a LinkedIn account. Many use Twitter, and some of those out on the periphery may still be using Myspace or Bebo. But what are the essential components of social networking as a digital literacy?

Firstly, I believe we need to network more smartly, particularly in a manner that helps us to learn more effectively in both formal and informal contexts. Jonathan Rose (2010) offered some interesting views about how social networking helps his off-line (for this read 'real life') world. In his blogpost *What's so social about social media?* Rose outlined three functions – supplementing, sifting and sustaining – all of which have a social dimension. In Rose's view, sifting can help to combat the media atomisation that has occurred due to the proliferation of hundreds of satellite and cable TV channels. Once we could all sit down for coffee and talk about what we had watched on TV the previous night. It is less likely that we would be able to do this today, with so many channel options on offer. Watching TV is no longer a distributed

communal activity, nor is much of modern life. What we can do however, with the aid of social media, is to find out what our commonalities are and who is within our community of practice, through filtering tools (such as hashtags) on Twitter and other timeline tools.

Social networking can also help us to find content we need, when we need it. Social bookmarking tools such as Delicious and Diigo enable us to drill down to excavate deeper knowledge through our social connections. Karen Stephenson (2004) believes we 'store our knowledge in our friends'. She describes an emerging distributed intelligence which is not limited by how much we can store and retrieve from our own personal memories. Today, it's not what we know, but who we know that is more important. We now live in an increasingly connected world where we have ubiquitous access to friends and colleagues. Selecting the right tools that will enable each of us to connect into and exploit the collective intelligence of the most relevant communities of practice is one of the new digital literacies professionals and students will need to draw upon.

Finally, social networking skills will require each user to be adept at connecting with new friends and fellow community members. But how will we know whom to connect with and whom to ignore? It's not as if we are in a large room at a party, deciding who looks or sounds like the most interesting person to make a bee-line for. No, it is infinitely more complex and information rich than that. We now have the ability to tap into vast amounts of information about the bewildering number of people we daily encounter on social media platforms. We can see by their avatar and username (sometimes) what kind of person they are and whether it would be interesting to connect with them. Profiles and follow/follower information are also useful sources of detail about a person's interests and background. What they tweet, post or share gives us advance information about whether we would find connecting with someone useful. So the ability to use social networking effectively is a key literacy for the scholar to acquire right now. If used appropriately, social media can provide rich social and intellectual rewards. Those who fail to network effectively may struggle to succeed in a pressurised world.

TRANSLITERACY

Transliteracy can be defined as being literate across a variety of different platforms. In essence, it is the ability to be able to create, organise and share content, and communicate across, and through, a variety of social media, discussion groups, mobile devices and other services that are commonly available. This assumes that we communicate differently depending on the tool we use. When I give a face to face presentation, it is qualitatively different (for me and my audience) to a remote presentation I give through Elluminate or Adobe Connect. The experience is not all that changes - we also tend to behave differently, and 'manage our impression' in a different way online. The way we represent ourselves (using avatars, user names) varies for many depending on what medium we are using. I represent myself differently in Second Life to the way I represent myself on Facebook, because each environment has specific affordances that prompt different responses from me. In LinkedIn, I manage a professional version of my online persona, which evaporates when I'm on Facebook. On Twitter I am a bit of a mixture. Sometimes I like to have a bit of fun, and at other times, I'm deadly serious. I have already indicated that each tool has its own particular set of affordances which enable or constrain particular ways of using it. In many ways, however, although these tools are different, they all have a common purpose. Thomas *et al* (2007) state this very well:

> *"From early signing and orality through handwriting, print, TV and film to networked digital media, the concept of transliteracy calls for a change of perspective away from the battles over print versus digital, and a move instead towards a unifying ecology not just of media, but of all literacies relevant to reading, writing, interaction and culture, both past and present. It is, we hope, an opportunity to cross some very obstructive divides."*

So for Thomas *et al*, the argument over whether media are different - for example whether digital will replace paper - is spurious. It's more important for us to recognise the significance of each tool, and how each can be used effectively in all its variations, and also in combination with other tools. Ultimately, transliteracy should be about seamlessly using whatever media and communication tools that are at our disposal, and also being able to discern which tools will be the most effective and appropriate in any given context. Do we learn better watching a YouTube video or reading a text? Are we better at presenting our ideas in pictures or as a podcast? I know my answer to that, and it may be different to your answer – which underlines the fact that we all learn differently.

Students today use a variety of tools to create and share content, and it is vital that they are able to do so in a seamless manner. It is important that students spend more time thinking about what they are learning and less time thinking about how to navigate around a website, or how to save a file. This is one reason why many students are more at ease using an external wiki than they are using an institutional Learning Management System. It is also the reason they choose to use Facebook rather than the institutional e-mail system when they want to send each other messages. But students do use all of these tools, and the secret to success is to ensure that they are comfortable with each, and have the requisite literacies to exploit each tool to its optimum value. This is the reason transliteracy is gaining increasing import as a digital literacy. It will assume even more significance, as more of us become our own broadcasters, publishers and directors.

MAINTAINING PRIVACY

Another important digital literacy is the management and protection of online privacy, something strongly emphasised by Buckingham (2006). This is aligned to e-safety, which focuses on the protection of people online. Indeed, each of us is vulnerable because there is a huge potential for our privacy to be breached in any online environment. I am certain you would be very angry if someone came snooping around your house and rifled through your personal belongings. And yet many of us can be careless about the way we handle our personal data when we go online. And the extent to which many of us are now electronically connected to others is astounding.

This raises a question: Are any of us really able to protect our privacy on the web? Social media seem increasingly pervasive, and many millions of people post up details of their private lives every day. These include contact details, personal photographs and dates of birth, details they would never dream of giving to a stranger. If they did, it would be considered bizarre and hazardous behaviour. And yet people do exactly that every day online. I am amazed at the dubious photos some students post up onto their social network sites. I wonder if they will still be comfortable with those photographs in a few years, when they apply for a job, and their potential employer performs a Google search to find more information.

It is all a matter of personal choice which personal details you make available on the web.

Your privacy settings may help you to protect your personal information, but even if you know how to choose the correct settings (and many students don't) how can you be really certain that your content is fully protected from prying eyes? Posting up your home address and telephone number, and then adding to your timeline that you are going on holiday next week, might be asking for trouble. How can you be certain who has access to your timeline? How do you know how many people read your Twitter feed or your Facebook updates?

You also leave a data trail behind you wherever you go on the Internet. Google and other search engines maintain a record of all the sites you visit during your time online. Many sites send cookies to your computer when you enter them. Some of these can be malicious, allowing other people to gain access to your computer memory, and if spyware has been used, to also record your keystrokes when you pay for something on Amazon using your credit card. Although it's still quite rare for this to happen, this kind of criminal activity is on the increase, and without appropriate Internet Security software, you run the risk of being one of the victims. Have you thought about the amount of personal detail you hold about yourself and your friends on your mobile phone? If you use public wifi networks or open your mobile to Bluetooth connectivity, you may also be opening up the entire content of your mobile for intruders to capture and use. A recent report from the BBC Click team revealed that although malware for mobile phones is on the increase, simple user naivety is still responsible for the majority of privacy problems.

For me, raising the awareness of students and other web users to the dangers of the Internet will always include the problem of maintaining privacy. The golden rules are: Be careful what sites you visit (your security software should alert you to any unsafe sites), be careful what you post up online that may have personal information in it (this is just common sense) and watch your back - protect your identity, because you never know who may be looking over your shoulder.

MANAGING DIGITAL IDENTITIES

If all the world is a stage, I demand better lighting! I also want someone to prompt me when I forget my lines. Some better costumes would be nice. Oh, and more exotic scenery? And while we're at it, how about a better script - one that more accurately reflects my true feelings....

William Shakespeare wrote the immortal lines 'All the world's a stage, And all the men and women merely players: They have their exits and their entrances; And one man in his time plays many parts'. The lines, appearing in the play 'As You Like It', were his acknowledgement that not only is life transitory, but that each of us performs several roles throughout our lives. Shakespeare also implies that each of us has an audience of some kind. I infer from this that I also play some roles reluctantly, possibly because I am constrained to act in ways that may not accurately represent the real 'me'. But what is the real 'me'? Perhaps one's true identity is dependent upon a variety of factors including context, emotional state and health status. Possibly it changes depending on relationships with the people who are in close proximity while acting out that particular role.

Social anthropologist Erving Goffman (1959) tried to address these questions when he proposed his 'dramaturgy' model - his interpretation of the 'presentation of self in everyday life'. For Goffman, human behaviour was very much dependent on time, space and audience. By audience, he meant those who observe the actor, or with whom s/he interacts. In essence, Goffman argued that we each present ourselves to others in a

carefully managed version that complies with the cultural values, norms, and expectations that are commonly held by actor and audience. Notice how a comedian, stage actor or pop singer manipulates his audience and you will observe how much they desire to be liked, accepted and focused upon. According to Goffman, the way each person represent themselves to others involves some kind of role playing (self-representation) that can involve scripts (speech patterns), props and costumes, just as an actor does during a public stage performance. Such management of impression is common to all humans and is used to form connections and gain influence with others, and also occurs in online performance of the self (Miller & Arnold, 2009).

The rapid emergence of digital media and the phenomenal growth in popularity of self broadcasting and publishing through social media, asks some new questions about how people represent themselves in virtual spaces. Sherry Turkle was one of the first researchers to conduct detailed studies into 'Life on Screen' by observing behaviour in multiple user domains (MUDs). Published in 1995, when the Web was still embryonic, Turkle showed how people employ multiple identities in virtual worlds, and that in some case these become as real to them as their identity in 'real life'. Her studies led Turkle to propose that new forms of personal identity are emerging as a result of prolonged interaction with others through technology - that our identities are increasingly multiple and decentred.

There is further evidence to suggest that people portray themselves differently depending on the social media platform they use - and through text and other media (Wheeler & Keegan, 2009). This may mean the same person using different avatars (images or animated characters used to represent real objects), usernames and forms of interaction, to suit the different norms and social expectations of the communities that frequent those various environments. In the context of my initial metaphor, some social media have better 'lighting' and 'scenery' than others. The audiences change, some are friendlier than others. But how much does the actor change, and to what extent do they manage their impressions to suit the expectations of their audiences? And how much should each of us pay attention to the way we manage our online impression - our digital identity?

CREATING CONTENT

One of the most important digital literacies students require today is the ability to create appropriate, subject specific content. Content creation is an important feature in many personal learning environment (PLE) models, and together with organising and sharing, makes up the cardinal triumvirate of skills that provides learners with a clear advantage. If you subscribe to constructivist theories of learning, you will understand why the creation of content is important in any context. We learn by doing, and we more actively engage with learning when we create artefacts that can be shared within social contexts such as communities of practice. Artefacts are a material outworking of knowledge creation, and according to Vygotsky (1978), they can be aids to solving problems that could not be solved as effectively in their absence. In turn, such artefacts can also influence the individuals who use them to draw attention to previously unknown activities and ways of conceptualising the world around us. When I write a blog post for example, I am creating new content as I write, and then in turn, that content may reveal to me something I may have missed if I had not written the post. The blog content allows me perhaps to view a problem from a different perspective. In essence, writing a blog enables me to know what I am thinking, in a concrete, persistent and searchable form.

Clearly, blogging is only one way to create and publish content online. The use of wikis in group learning to promote collaboration and make a record of what has been learnt is becoming more popular in all sectors of education. Podcasts, normally in the form of the audio recording of an event, are also a means of projecting and sharing content to others so that they can listen at a time and in a place (usually on the move) of their choosing.

Sharing of other forms of content such as images and videos can be easily achieved with the use of photo and video sharing services such as Flickr and YouTube. I often share my slideshows through Slideshare, and receive feedback and other data on their subsequent uses. However, for any of the above formats of user generated content to be fully usable, it first needs to be located. Without organisation and tagging (the use of key descriptive words) such content is not searchable. In my next blog post in this series on digital literacies, I will explore this facet of the social web in more detail.

ORGANISING CONTENT

The very act of creating content, whether it is a video, blogpost or podcast, is often with the intention that it will be shared in some way, usually on the web. Now we have the social web, there are more ways than ever to make your content available to a vast audience. But how do you share in such a way that makes it visible to the web? The answer is that you organise it by 'tagging' it. You think of key words that best describe your content, and then insert them into the appropriate box within the tool you are using.

Tagging content is something of an art. Choosing the correct descriptive words to tag your content, can sometimes be a little uncertain and is often subjective. But tag you must, if you want your content to be discoverable. Tagging will also make finding content within a large stack of bookmarks a lot easier. You can search for content in 'bundles' - this is useful if you only want to see the links in your list related to 'podcast' or 'audio', for example. Some tagging tools also offer tag clouds - clouds of labels that have larger or smaller font size depending on the amount of times they appear in your bookmark list.

But we can go further using tagging, so that content becomes a community artefact around which groups can discuss, interact and collaborate. Using a web service such as Delicious for example, will allow you not only to make your content more visible to those who are searching using key words, but it will also reveal to you (and to the other users) exactly who else may be interested in the same, or similar content. This is more than just bookmarking. It's social bookmarking - organising your content, and the content of others, into sets that are more useful and more socially coherent. The number at the start of each hyperlink displayed in my own Delicious account indicates how many other people have bookmarked the same link. If you click on that link, it will display them. Click on any user and you will see what other links that user has bookmarked. Some of these may have slipped past you, but you can now see them and also visit those sites and then bookmark them if you think they might be useful to you. You can also hold conversations with those others around you about the sites you find interesting, and perhaps learn even more about your mutual interests. This is the power of social bookmarking - just one of the many ways you can organise and share your content on the social web.

REPURPOSING CONTENT

The ability to repurpose, remix or otherwise reuse existing content is one of the key

features of the social web. Why reinvent the wheel? If content is already available on the web, the logical choice would be to see if it can be reused, or even adapted or altered to suit your own needs.

Currently there is a trend for scholars, teachers and academics to make their content available for download and many are allowing others to repurpose or alter this content. Most of my recent slide presentations are freely available on this Slideshare site, and I publish them under a Creative Commons (CC) license that allows others to download and use them either as complete slideshows, or to select individual slides that can be inserted into their own slideshows. I also allow derivatives - that is, you can take the images or texts, or even the design themes of my slides, and repurpose them for your own use without cost. Some have used my slides for their own presentations or workshops (with full acknowledgement to me of course). Probably one of the most pleasing results for me has been when people have translated my slides into other languages.

The ethos of the social web is that we share and share alike - why hoard knowledge or ideas if they can be of benefit to others? Knowledge is like love - you can give it away, but you still get to keep it. The only barrier to sharing and repurposing of content is copyright. The web is changing rapidly, but for many, copyright laws remain archaic and arcane.

Although these outmoded, unwanted and ultimately despised copyright laws apply to internet content just like they do to books or music CDs, there are also some welcome signs of change in the digital domain. Copyleft and Creative Commons are just two of the initiatives that have emerged in recent years. Creative Commons will enable you to share your own content whilst protecting your own intellectual rights, and also simplify how you can use, repurpose and remix other people's content too.

The 'mashup' - using sounds, videos, images, text or any combination of these - to make entirely new creative content, appeals to many. It can be time consuming, but also very rewarding. So, the next time you find some really useful content on the web, look out for a licence agreement somewhere on the page to see if you are allowed to re-use it.

FILTERING AND SELECTING CONTENT

When there is live TV coverage of an event do you watch the entire broadcast or just the highlights? The answer of course will depend on a number of factors, including how interested you are in the event, and how much time you have available to you. It's exactly the same with content on the web. Recently I wrote about the 'tsunami of content' online that threatens to swamp us all. Just about everyone using the web today is creating content on a daily basis. How do we find the gold dust content amidst all the dross and trivia that exists on the internet?

Search engines have their place, and of course, we tend to use them a lot. Some of the more intelligent search engines are morphing into answer engines, computing your question against highly structured data (see for example Wolfram Alpha), and providing focused information. Often, for busy professionals, even this is not enough. Then there is problem of how to organise your content when you actually find it. Many are using tools such as Delicious.com or Diigo.com to tag, store and share their favourite content. These tools are also excellent and well used, but are they enough to cope with the vast quantity of content we want to keep? Wouldn't it be nice to have up to date, regular content, all presented in one place?

Enter the digital curation tools. There is a special breed of web users out there that we call 'the curators.' In a sense, curators are

a little like their counterparts in museums, because they tend to trade in very specialised, focused content. As a part of the great collective, curators choose a topic they are interested in, and then search and display dynamic content related to this topic, using one or more digital curation tools. They are collectors of the virtual and ephemeral and they have some great tools.

Scoop.it is a very useful and attractive curation tool, enabling summaries and snapshots of related content from blogs, media sharing sites and other social media to be displayed, usually in two columns.

Storify is another style of curation tool, enabling the curator to search for specific content from social media sites that can be sequenced into a blog style story. The curator can add their own text, and embed the final product into their blog.

A third curation tool is Pearltrees, which works as a kind of connective network of content, which can be shared, repurposed and linked in a number of ways across social media platforms. The Pearltrees Teams group function also enables users to collaborate to create shared curated collections of content.

All three tools allow conversations and further sharing, and all three are very attractive as a means of making sense of the vast amount of content there is on the web. There are of course many other tools being developed that can also perform similar tasks of consolidating and accumulating content, and offering it in a digest form to busy professionals. The great collective it seems, are becoming the great collectors.

SELF-BROADCASTING

The term 'self-broadcasting' would seem on the face of it to be somewhat narcissistic.

But we need to be aware that the social web has shifted the balance of power away from commercial production companies in favour of the individual. The shift is from push to pull. This is a characteristic of the Web 2.0 and Edupunk movements - the do it yourself culture in which costly proprietary systems and tools are spurned in favour of haphazard, unbranded, informal mashups and loose aggregations of tools. There is a huge array of social web tools to choose from and many of them are free at the point of delivery. Furthermore, it is a participatory ecosystem. Where Web 1.0 was all about downloads, Web 2.0 is about uploads too. Web 2.0 tools have made it possible for a massive, unprecedented surge in self-publication and personal broadcasting. The usage statistics of video sharing service YouTube should convince even the strongest sceptic that people really want to share their content. As I write this paper, YouTube is boasting over 3 billion views within each 24 hour period and receives 72 hours of uploaded video each minute (RTE News, 2012). Also, the photo-sharing service Flickr is claiming that in 2011, between 4.5 million images are uploaded every day, and hosts well in excess of 6 billion photographs and other media such as short video clips (Royal Pingdom, 2012). The blogging sentinel service Technorati lists 1.2 Billion blogs currently active (Technorati, 2011). These are phenomenal statistics. People everywhere are using the web to broadcast, publish and share their ideas, opinions and creative works to the rest of the world. It may not all be great content, but here and there, you will find gems if you search for them. This is not narcissistic – it is natural and progressive engagement within the online participatory media culture.

The music industry has had to learn the hard way that it no longer has the monopoly on music production and distribution. It now co-exists alongside independent companies and individuals, all of whom are just as intent on selling - or in some cases, giving their music

away for free - to the public. Many teachers and students are doing the same thing, with educational content. Traditional publishers are having to sit up and take notice - particularly to the open access movement. Public awareness has been raised about the openness and availability of educational content. When students encounter a pay wall, they will simply go elsewhere to discover the same or similar content.

Podcasting, and its visual equivent, vidcasting, are very quick methods of publishing your ideas online for others to discover. Blogging your ideas over a period of time attracts a readership, and if you are lucky, and produce consistent quality and quantity of posts, you will garner a loyal following of readers who will return again and again. The bonus will be if they also comment on your posts. For many bloggers, this is the only spur they need to persist. But beware, for the social web can also be the not-so-social-web. Peer review is very informal, and can be anonymous. Either way, it can also be harsh and even abusive, so bloggers, broadcasters and publishers need to be resilient. This kind of digital literacy enables learners and teachers to fully engage in the social web culture, and all its rewards. Every time they post or upload new content, authors and producers makes a mark on the web and the reach of their digital footprint extends.

CONCLUSION

The digital age is changing our lives irrevocably, and has the capability to sustain its disruption. To be a student in this century is to be a lifelong learner. Learning through digital media can be fraught with difficulty, and demands a new spectrum of literacies for successful outcomes. The ability to manage one's online presence, creating, organising, repurposing and sharing content, managing online identity and protecting personal data are all important, but perhaps transliteracy is one of the most important, as it represents the ability to be equally adept across a variety of platforms. The benefits of engaging with social media can far outweigh the limitations and dangers, if the appropriate literacies are practiced.

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LEARNING THROUGH PROFESSIONAL ENVIRONMENTS: THE COMCITY PROJECT

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Learning through professional environments: The ComCity project

ABSTRACT

UOCom is a virtual communication agency that has been set up as part of the ComCity teaching innovation project (Creus & Lalueza, 2012). Promoted by lecturers in the Information and Communication Sciences Department of the Universitat Oberta de Catalunya, this innovation project proposes the creation of a set of 2.0 environments designed for virtual professional practices (e-practices) in the field of communication. In this article we describe and analyse the initial developments of the project, from the conceptual design stage to the start-up of the pilot trial of UOCom agency, which is the first ComCity environment to be put in place.

KEYWORDS

professional practices, 2.0 environments, teaching innovation

1. INTRODUCTION: CONTEXT IN WHICH THE PROJECT EMERGES

It has been shown from a number of approaches that digitalization processes are causing radical changes in the ways of learning (Siemmens, 2004; Seely Brown & Alder, R., 2008; Cobo & Moravec, 2011). Neither is it new that within the framework of our network societies, the abundance and disorder of information live alongside the proliferation of personal devices, spaces and strategies for the production and dissemination of knowledge that goes beyond the walls of educational institutions. This scenario poses a number of challenges to higher education. An important one is the need to enquire about the meaning of vocational training at a historic time in which the useful life of knowledge is exponentially reduced.

In many professional spheres, but primarily in those that are strongly influenced by the emerging information and communication technologies, the time lapse between the moment when knowledge is acquired and when it becomes obsolete is getting increasingly shorter. Generally speaking, we can say that a large part of the technologies that we use today in advanced societies were not used ten years ago. So many of the professional skills of that time have little or no practical application in today's professional contexts.

All of this has significant implications for professional practice. In effect, even though not so long ago the working life of an average person could be mapped out in a straight line – a career constructed throughout a lifetime – career paths today are generally much less stable. Richard Sennett explained this phenomenon very well in such books as The Corrosion of Character (1998) and The Craftsman (2008) in which he showed us how globalization and the flexibilization of employment relations is giving rise to ever more fragmentary professional processes and identities. Taking digitalization processes as his reference, John Moravec (2004) also pointed out that, unlike industrial society which called for workers located in a specific place and carrying out very specific functions, the jobs associated with knowledge and information society have become much less specific in terms of location and the tasks to be performed. This is something that, according to this author, has a lot to do with new 2.0 technologies.

Seeking to provide a response to the challenges posed by this scenario, skills-oriented approaches are gaining more ground in university education. These approaches aim to enhance not only the development of specific professional knowledge, but also the development of cross-disciplinary social skills such as personal communication, the ability to work as part of a team or the capacity to understand and adapt to change and new work methodologies. From this perspective, professional practicums take on special relevance as a fundamental learning stage of a degree course.

Effectively, in more and more fields, the implementation of practicum is becoming recognized as a point of connection between the education system and the professional world, and as a key instance in the development of professional skills. Paolini and Rivarola (2012:20) highlight some of the possibilities offered by undertaking professional practices as part of university learning. They state that practicum:

- Favour the construction of significant learning that integrates the diversity of knowledge created throughout the degree course;
- Stimulate the development of professional identities through active and committed participation in practice communities;

- Extend the possibilities of more autonomous actions with genuine role-playing tasks;
- Directly contribute to the start and consolidation of professional careers.

Echoing these contributions, the ComCity innovation project seeks to provide a response to the specific challenges posed by the curricular offer of professional practices in a distance education setting. It is worth remembering that UOC educational model is based on an open virtual environment and on flexible and asynchronous teaching and learning processes (Gros et al, 2009). In that context, undertaking on-site professional practices constitutes an alternative that is scarcely in line with the needs of a significant number of its students, who have chosen online education as an alternative that affords them, above all, freedom in organizing study times and space.

This is why it becomes particularly necessary to explore the possibilities of an environment where the students can carry out professional practices virtually, an option that is currently considered by a very small number of companies and institutions. With this in mind, the ComCity teaching innovation project proposes the creation of a series of 2.0 environments specially designed for the implementation of virtual professional practices (e-practices) in the field of communication. The objective, in short, is to create training spaces in which to reproduce the dynamics and circumstances of a real professional setting, such as teamwork, problem-solving under limited conditions of deadlines, customer orientation, etc.

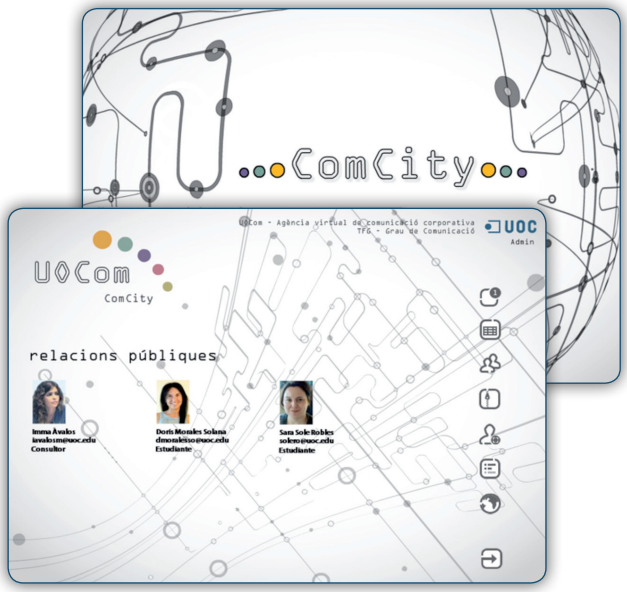
In this article we present the development process and some preliminary results of the pilot trial of the first ComCity environment to be put in place: The virtual communication agency UOCom.

2. COMMUNICATION AND SOLIDARITY: A VIRTUAL AGENCY MANAGED BY STUDENTS

One of the many challenges related to the use of information and communication technologies in education is how to promote the collaborative construction of knowledge in e-learning environments. It has been stated on many occasions that although the relational trend is reflected in the technological evolution itself – as evidenced by the emergence of the web 2.0 and the so-called social software – the implementation of real collaborative processes in distance learning contexts continues to put up significant barriers. In this sense, a number of studies corroborates that the most frequent uses of ICT in classrooms, both by lecturers and students, are mainly to do with information search and processing, whereas the really innovative initiatives that pose the construction of knowledge in collaboration are still timid (Ornellas et al., 2009; Sancho and Correa, 2010; Díaz Barriga and Morales Ramirez, 2008).

The UOCom virtual agency is constituted as a 2.0 environment where collaborative work is the cornerstone of the learning methodologies. The students who do their professional practices in the agency work as a team, developing real communication projects for organizations in the tertiary sector. Consequently, all the dynamics carried out in UOCom are articulated on the basis of a network working structure that comprises:

- **Students on practices:** The students are the driving force of the agency. They work as a team, connected to one of the UOCom departments, carrying out tasks that are part of an inter-related and inter-dependent work system. They are responsible for the management and correct execution of the products and services that the agency is commissioned to undertake.



UOCom: virtual environment[1].

- **Department Managers:** Each team of students works under the guidance of a department manager, who is the person from the teaching staff responsible for guiding the students and coordinating their work.
- **Clients:** They are organizations in the tertiary sector. On the basis of a collaboration agreement, UOCom offers its services completely free of charge to non-profit making organizations that lack sufficient resources to develop communication products and services.
- **Board of Directors:** The UOCom Board of Directors is comprised of lecturers in the Information and Communication Sciences Department and members of the UOC Educational Technology team. The Board is ultimately responsible for the coordination of the educational project and the proper running of the agency.

All of these players interact in a work space – the UOCom virtual environment – that aims to foster and facilitate online collaborative work.

2.1. START-UP OF THE PILOT TRIAL

The pilot trial of the UOCom agency began in September 2012. As the framework of application, the Final Degree Project (FDP) of the Bachelor's Degree in Communication was selected. The FDP is a compulsory subject that carries 12 credits (ECTS) and is fundamentally geared towards the integration of the theoretical and practical knowledge gained throughout the Bachelor's Degree. This subject combines two pathways that complement each other. On the one hand, the completion of an individual dissertation; on the other, a professional practices period aimed at fostering the integration between theory and practice.

The UOCom pilot trial was put in place linked to the practical pathway of the FDP and was structured in three phases:

- **Phase I:** The first phase of the pilot trial consisted of a training period for the team of tutors. This training was done virtually, with a dual aim: 1) For the tutors to know how the environment worked and to explore the different tools included in it. 2) To develop collaborative strategies applicable both to the design of work activities and dynamics (by the tutors) and during the practices (by the students).
- **Phase 2:** The second phase began with the students accessing the UOCom virtual

1. **Tools integrated into the pilot trial stage: Forum:** Message exchange tool that permits the creation of lines of debate. **Chat:** Instant messaging tool that enables quick and streamlined synchronous communication between all the team members. **Calendar:** Online calendar. It allows the administration of different calendars and their shared viewing. **Video-blog:** Blog allowing short videos to be recorded and posted very quickly and easily. **Archive:** Virtual repository that permits the online creation and editing of documents in different formats. **Meeting room:** Chat video room for undertaking synchronous meetings (room for six participants). **Wiki and Blog:** collaborative websites that can be edited by all the team members.

environment and the development of the agency's activities. This phase took place between September and December 2012.

- **Phase 3:** This is the results assessment phase. It will begin once the practices period has ended and foresees the application of two main data gathering instruments: 1) the staging of a discussion group with tutors, developers and lecturers in charge of the project; 2) a qualitative assessment questionnaire aimed at the students.

A total of seven students took part in the pilot trial, with the start-up of three departments in the agency: four students formed the creativity team, two students comprised the public relations team and one student joined the administration department. Each of these departments worked under the coordination of a tutor responsible for structuring the work dynamics and guiding the students in the development of the practices. Similarly, two tertiary sector organizations joined the pilot trial as the first clients of the UOCom agency: the Mambré Foundation and the Integra Pirineus Foundation.

In the following section we show some of the partial results that emerged in phases I and II of the UOCom pilot trial. They are preliminary data that, afford us a glimpse of a number of trends about how the work dynamics in the agency are being structured and that enable us to design some improvement proposals.

3. INITIAL CONSIDERATIONS ON THE BASIS OF THE PILOT TRIAL

The process of adaptation of all the players to the UOCom environment entails the need to construct and experiment with new forms of interaction between people and teams. In this sense, one of the challenges associated with the implementation of this e-practices model is the transformation of the relations between the students and the teaching staff. It is worth remembering that the dynamics that are generated in a traditional virtual classroom (UOC campus classroom) are generally based on a two-way lecturer-student work structure, where the latter usually receives clear and stable instructions about tasks to be performed, execution processes and submission deadlines. This form of relation is usually a constant in the creation of work habits and in the configuration of the educational relations between the two groups.

However, the methodology of UOCom involved a significant change in work dynamics and consequently a major transformation in the roles that teachers and students had to be taken on. Specifically, we went from flows of knowledge focused on the lecturer-student binomial to a type of network organization where students and tutors constitute a work team, sharing responsibility for carrying out the tasks entrusted to the agency. We should stress that the collaborative work dynamics implemented in UOCom requires both groups to shake off deep-seated habits, as rarely during the degree course does the opportunity arise to get involved in the performance of tasks as a team.

Added to this, an initial need identified during the first developments of the pilot trial is that of having more informative and formative instruments that help both tutors and students to get involved in the collaboration dynamics and to know the various possibilities offered by the tools included in the environment. Consequently, an initial improvement proposal resulting from this first phase of the pilot trial is the design of strategies that promotes better adaptation to the work methodology proposed (eg a welcome plan that includes a more complete tutorials package and a more detailed explanation of the work dynamics and the internal communication channels of the agency).

Another important feature of the project can be seen in working for a real client, not linked to the university. This leads to greater motivation both for the teaching staff and, in particular, for students. But it also requires a dizzying leap from the prefabricated security of the academic setting to the responsibility of taking part in an activity where success or failure will have an effect beyond the classroom. Thus, UOCom follows the path of a prior training experience in the field of corporate communication (Lalueza & Estanyol, 2012) in which, though on a smaller scale, this connection to a real professional setting was already proposed.

Finally, it should be pointed out that from the perspective of shared responsibilities between people and teams, the network work structure generates significant challenges with regard to the construction of instruments that allow the assessment of the acquisition of skills at an individual level. It is expected that after completion of the pilot trial and the process to assess its results, we will be able to continue to make progress in this direction.

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WHEN TIME IS RUNNING OUT: E-STUDENTS UNDER PRESSURE WITH THE UOC *KRONOS* APPLICATION

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When time is running out: e-students under pressure with the UOC *Kronos* application

ABSTRACT

The *Kronos* teaching innovation project enabled the creation and implementation of a web application, integrated into the virtual campus of the Open University of Catalonia (UOC), for carrying out time-limited exercises asynchronously. Developed in the framework of APLICA 2010 and with the support of the Vice-Rectorate of Research and Innovation, *Kronos* represented a means for overcoming one of the disadvantages of virtual education, as compared with face-to-face education.

While a conventional environment easily allows students to be tested for certain skills using time constraints, in an e-learning environment like the UOC's, which guarantees communication between student and lecturer despite connections being made at different times and in different places, it is extremely complex to carry out exercises that require the precise time of execution to be controlled.

Kronos fully respects the asynchronous philosophy of the university's educational model so that students can test certain knowledge or skills under time constraints and lecturers can have more tools available to them to monitor learning progress.

This paper analyses the results of the tool's implementation in the Creative Thinking and Speaking and Writing courses of the Degree in Communication, during which assignments were given to be solved in twenty minutes and six hours, respectively. These assignments were designed to assess creative flow, on the one hand, and memorising and oratory, on the other. The results reveal that students have a similar pattern of caution despite different time constraints and that academic performance is, on average, the same or higher under time pressure, as compared with other tests set during the course.

KEYWORDS

time pressure, time factor, innovation in teaching, e-learning, creative thinking

INTRODUCTION

Based on the premise that the concept of time is one of the most polysemic in education (Romero, 2010), e-learning has above all been defined by the temporal flexibility it offers to lecturers and students and consequently by the need to effectively regulate the time devoted to teaching and study.

Although its importance has never been questioned (Gros, Barberà & Kirshner, 2010), research that specifically takes into account the time variable is still scarce and time management is generally understood within a decision-making and prioritisation process (Demeure et al., 2010). This fact is even more evident when study prospecting focuses on time as a variable that can aid in the learning process, beyond being considered a control mechanism (as occurs in research on automatic processes, which are more specific to the field of computing).[1]

In line with its role in contributing to learning, the *Kronos* project was conceived with the overall aim of "defining, designing and evaluating a tool to help students work on the time management competency during academic activities". This tool could be included, independently and at the discretion of lecturers, in assignments for which a time constraint or pressure is relevant, and it would respect the asynchronous philosophy of the UOC's educational model.[2]

The *Kronos* application pilot was launched during the first semester of the 2010-2011 academic year in the framework of the Creative Thinking course, a core subject of the Degree in Communication. Following some minor technical adjustments, it has been used continuously to assess, in a maximum of twenty minutes, the creative flow of students once they have learned a variety of idea generation techniques discussed during the course. At the end of each semester, a survey is sent to students who have undergone continuous assessment so that they can evaluate the usefulness of the tool.

Given the level of satisfaction reported by students as well as the applicability of *Kronos* to other subjects and learning objectives, it was considered appropriate to use it again for the Speaking and Writing course during the first semester of the 2011-2012 academic year. This time it was used for a memorising and oratory skills exercise and students were given six hours to complete it. Students were later given the same survey as the one used for the Creative Thinking course with the additional goal of analysing the differences between subjects, type of exercise, time constraints and academic performance.

Regarding this latter point, it is interesting to corroborate that a certain degree of time pressure can improve some aspects of scientific performance, including innovation (Andrews & Farris, 1972). Although the work by these authors referred to a five-year panel study on the performance of scientists and engineers in relation to working time, its conclusions are relevant to this analysis in that the concept of "innovation" can be extrapolated to the creative product that was requested in the Creative Thinking exercise and the "other aspects of scientific activity" to the memorising and communication skills set the for Speaking and Writing course:

1. Koutsabasis et al. (2011) claim that asynchrony in e-learning improves personal time management.
2. The UOC model, understood within the Coldeway DT-SP quadrant, i.e., at different times and in the same place (virtual campus classroom), according to Barker and Brooks (2005). This aspect should be underlined, since one of the institutional constraints was that the application should be integrated into the campus.

> *"Perhaps research management saw the reduction of time constraints as an appropriate way to encourage further creativity. However, our data suggest that innovation prospered under time pressure just as did other more routine aspects of scientific performance" (Andrews & Farris, 1972, p. 195).*

PRE-KRONOS: DESIGNING THE TOOL

Since it was founded in 1995, the UOC has consolidated an e-learning model that allows for a satisfactory asynchronous relationship between the student and lecturers, tutors, administrative staff and fellow students. However, when evaluating certain competencies of students under time constraints, especially in the context of adapting studies to the European Higher Education Area, this asynchronous model posed an obstacle, which, as noted above, has been overcome thanks to the *Kronos* application.

The goal during the first phase of the teaching innovation project was to achieve a comprehensive and consensual specification of the features that the new tool should have in order to be as helpful and transversal as possible. To ensure this, an online semi-structured questionnaire was designed and sent to teaching staff in the departments of Arts and Humanities and Information and Communication Sciences.[3]

A total of 67 responses were received from all university studies (it was specified in the questionnaire that it could be distributed freely). Based on the results, a background document was drawn up with the objectives, constraints and needs to be covered by *Kronos*. It also took into account reservations expressed about the students' expected perception of the supposed benefits of a tool for monitoring and managing the time they take to complete an exercise. The following statement illustrates some of the reservations expressed, which turned out to be unfounded, as we will see from students' comments below:

> *"The time factor is a very necessary and natural parameter in face-to-face classes; in a telematic context, time display tools may be considered intrusive and therefore be rejected, so I think it is important to explain to students their usefulness and how they will be beneficial to them".*

The Educational Technology team began a process of functional benchmarking and looked for suppliers to design and develop the new application. After discarding the option of adapting any existing free software tools, they proceeded to create an entire web application that would interact between the virtual classroom and the continuous assessment activity log (which is where exercises are commonly submitted and includes the exact date and time that students upload their files). In this simple manner, the *Kronos* application could detect when an activity was given in late (time difference between download and delivery) and it would not be a problem if the *Kronos* screen closed or the campus session expired after the assignment brief was downloaded.

KRONOS: THE PILOT

Once the application was designed, the pilot version was launched in the three Creative Thinking classrooms of the Catalan campus

3. The survey was conducted through Google Docs and its design and content is available at https://spreadsheets.google.com/viewform?hl=es&formkey=dEhFdm93NWtNazhHNVhZV1htSEUzTWc6MA#gid=0

(with a total of 201 enrolled students) and the Spanish campus classroom (with 23 students). Training was provided to the four consultants who would be using the application, and two environments that were already in place were employed to test the outcome of using different time constraints for the same exercise. Given that the number of Catalan campus students was much higher, and thus so were the chances of incidents occurring, they were given a maximum of twenty minutes; meanwhile, the Spanish campus students were given only fifteen minutes.[4]

The operating sequence of *Kronos* has the following steps, according to the view from the student's virtual classroom: a) students access the assignment brief as usual; b) students are given automatic access to the application and the timer is activated the instant the assignment brief is loaded; c) before the clock shows that the time is up (00:00:00 value), students must load the finished exercise in the activity log, just as they would do for any other activity.

There were no problems with the server or technical issues affecting the proper functioning of the application during the pilot test, but it was found that cheating could occur if lecturers followed the usual teaching routines.

Students typically download the assignment brief from the classroom calendar on the appropriate day, almost automatically, without reading the instructions that the consultant may have written on the board. For the exercise performed with *Kronos*, students were given instructions, both on the board and in the download window, to work on the learning unit materials before reading the assignment brief. In addition, they were told that the work could be carried out at any time, but that it should be done during a quiet moment and without interruptions, as it would have to be given in within a certain timeframe.

Despite the warning, five Catalan campus students accessed the application during the initial hours and were able to read the assignment brief. Some of them reported this to their consultant (claiming that it had been a "mechanical" act), but others were discovered subsequently through the *Kronos* log data.[5] To prevent them from disclosing the contents of the assignment brief to their peers, the exercise was removed from the application and students were told that it would be made available to them again within a few days (during which they should study for it) and they were reminded again of the mechanics. Finally, four new assignment briefs were prepared and loaded to the application as each of the exercises were given in.

The original assignment brief was left in the Spanish Campus classroom and students spent an average of 13.5 minutes (of the 15-minute limit) on the exercise. In the Catalan campus classrooms, the average time spent was 17.14 minutes (of the 20-minute limit), so the pattern of caution was similar in the two environments.

On completion of the continuous assessment, the tool assessment phase began with a semi-

4. The five-minute difference did not represent a significant drawback for the Spanish campus students (since the exercise could be done in less time), but if we consider that the total number of students who felt that the time given to complete the exercise was insufficient accounted for 59%, it should be noted that this figure represents 57.3% of the Catalan campus students and 72.78% of the Spanish campus students (a difference that is consistent with the difference in time, although it is not statistically significant).
5. The classroom view of the consultant (virtual lecturer at the UOC) shows the time spent by each student on the exercises and gives access to graphs with the statistics of the dates and times the exercises were given in.

structured online questionnaire for students to fill in.[6] A total of 79 students responded, which accounts for 35.27% of the total.

An analysis of the data revealed that:

- 25% of Catalan campus students confused the maximum time set for the exercise and selected the 15-minute option.
- 14% reported technical problems while downloading the assignment brief and attributed them to their own computers or to a lack of specific software. Taking this into account, the assignment brief is now given in a PDF file and graphic elements that may slow down the loading process have been minimised.
- 17% declared that the mechanics of the exercise were not clear enough. Responses to the open question on suggestions for improvement revealed that too much information was the main cause for confusion.
- Students believed that lecturers used the *Kronos* tool "to evaluate contents under time constraints," "to evaluate certain competencies" and "to identify knowledge gaps" in that order.
- Students regarded "know-how under time pressure", "time management" and "creative capacity" to be the competencies that can be assessed using *Kronos*.
- The tool was ranked positively by 88% of users in the overall assessment and more than half (53%) of the respondents offered suggestions for improvement.

POST KRONOS: IMPLEMENTATION IN ANOTHER COURSE

Once the application had been used during two semesters of the Creative Thinking course, it was decided that it would also be used in the three Catalan campus classrooms of the Speaking and Writing course, with a total of 90 enrolled students.

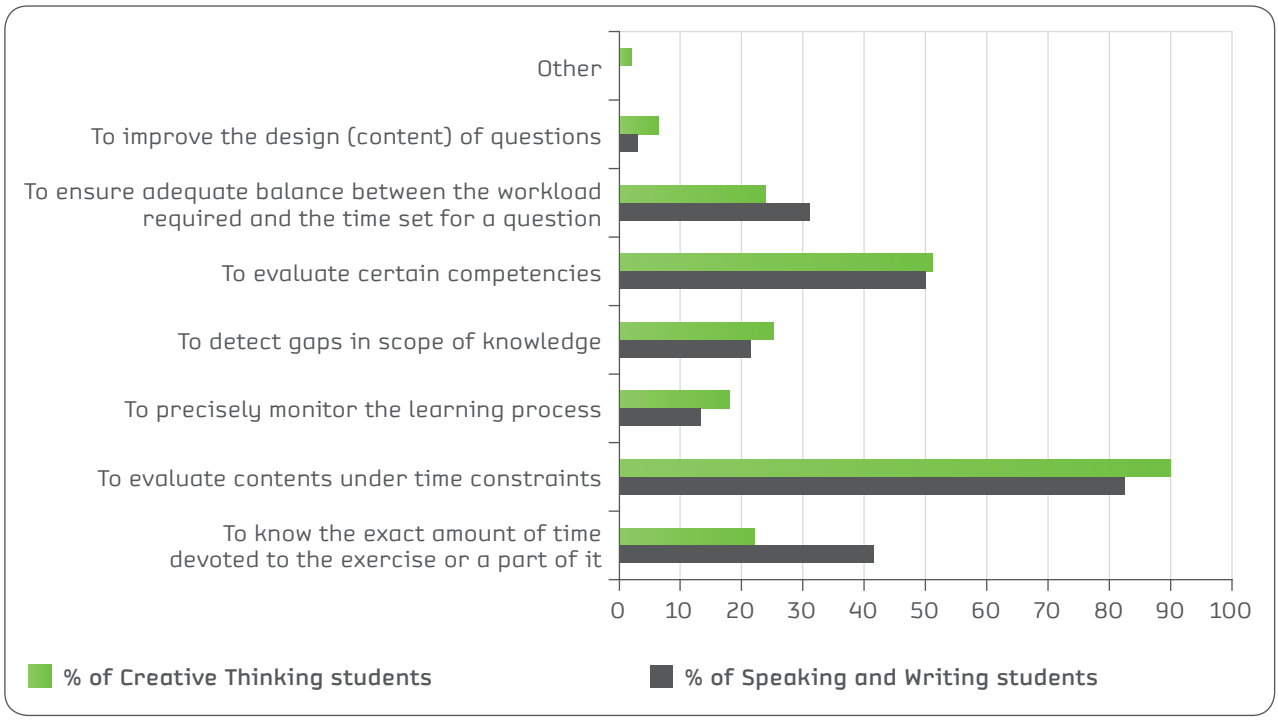
This time, an exercise was proposed in which students had up to six hours to memorise a text (and they had to film themselves as proof that the task was being performed correctly). To prevent cheating, the assignment brief model was changed as exercises were loaded to the corresponding application. At the end of the continuous assessment, the survey given following the pilot test was replicated and a comparative analysis was made with the results from the two courses. The main variable to consider was the notable difference in the time constraints given.

This time, 40% of students took part in the survey, almost 5% more than for the previous course. In comparison with the pilot test analysis, the following was noted:

- The students who performed the exercise on time devoted an average of 4.84 hours to it, and 81% accurately recalled that the time limit was six hours (the rest hesitated between four and five hours).
- The same percentage felt that they had been given enough time to complete the exercise, but no one said they had been given too much time. The 19% who said they needed more time should be contrasted with the 29.5% of the total of all classrooms who went over the time limit set for the exercise; therefore, it can be concluded that, despite going over the set time limit, some students considered that they had been given sufficient time, and thus somehow acknowledged a time management or technical error or an unforeseen occurrence during the exercise.

6. The student survey was also managed through Google Docs and is available at https://spreadsheets.google.com/viewform?hl=es&formkey=dHhBYzBoLWsxMS1BRXlDSlpqenpUSWc6MQ#gid=0

Figure 1. Lecturers' reasons for establishing or limiting the time for performing an exercise



- 8% of students recalled experiencing problems while downloading the assignment brief due to technical problems.
- All students felt that the mechanics of the exercise had been well explained.
- Regarding the main reasons for using the *Kronos* tool, the students on this course coincided on the first two with those given by students on the previous course ("to evaluate contents under pressure" and "to evaluate certain competencies"). However, the third reason they chose was "to know the exact amount of time devoted to the exercise or a part of it", an option that is consistent with the type of exercise performed and the total amount of time given (Fig. 1).
- As regards the competencies to be evaluated, the first two coincided: "know-how under time constraints" (although it is indeed curious that in this course, which had a much longer timeframe, it accounts for 89%, 26% more than it did in the Creative Thinking course) and "time management". The third reason selected was "problem solving", an option that is reasonable and consistent with the specificity of the exercise (Fig. 2).
- The tool is ranked positively by 95% of users in the overall assessment.[7]

Apart from the analysis based on data from the questionnaires, and with the intention of contrasting the relationship between time pressure and performance, the marks obtained by each student in the *Kronos* exercise were compared with their final continuous assessment mark. The results are in line with research conducted by Andrews and Farris (1972), which suggests that a certain time

7. The survey given to students on the Speaking and Writing course is available at https://docs.google.com/spreadsheet/ccc?key=0Alx587YO3df9dEE5cHYxTEFkOHVCSUZPYVloODNpeGc#gid=0

Figure 2. Competencies to be evaluated under time constraints.

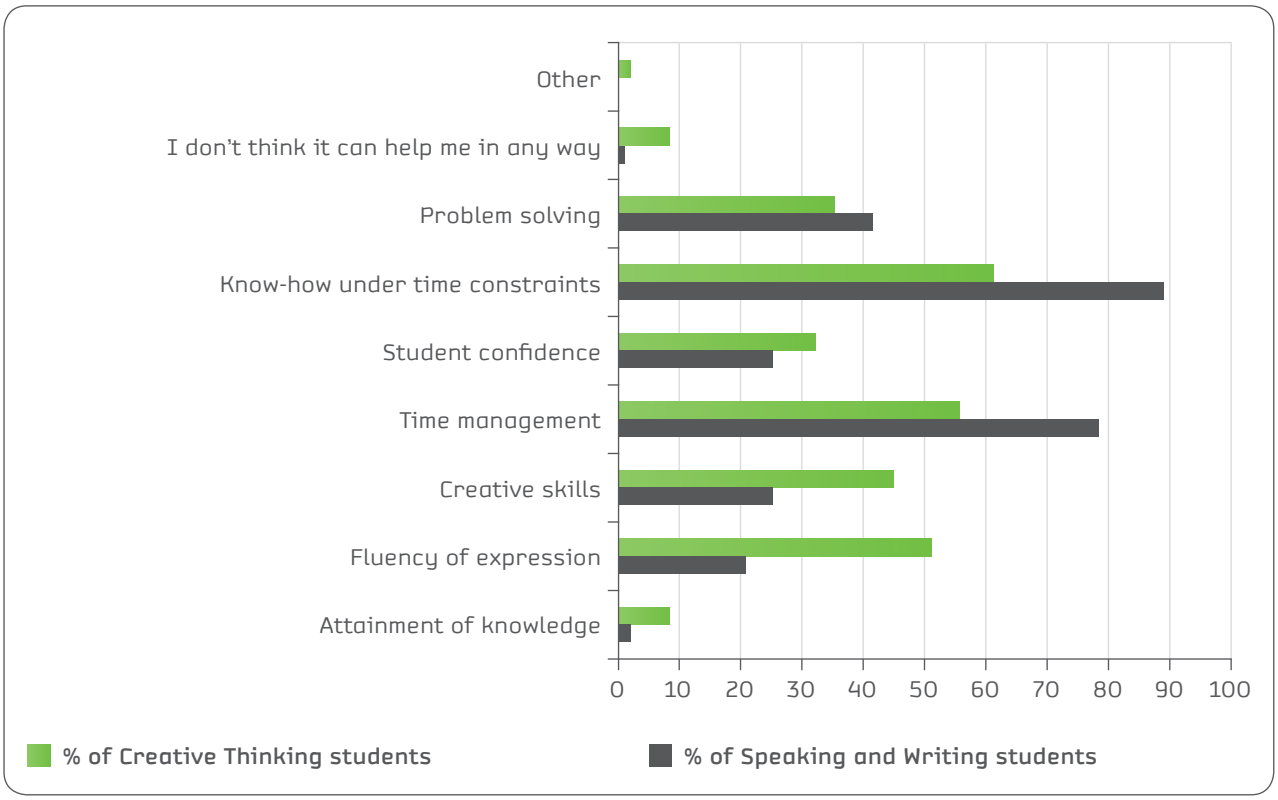
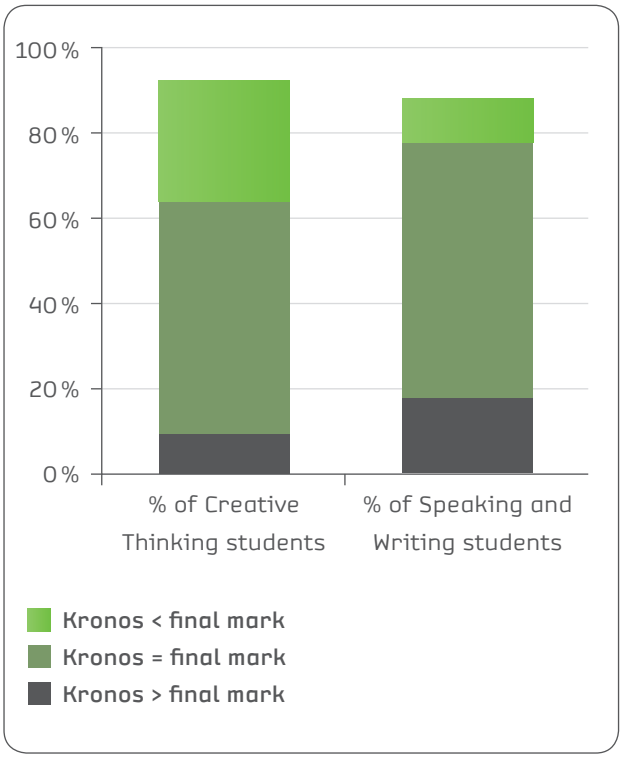


Figure 3. Performance in the Kronos exercise compared with that in the continuous assessment.



pressure can improve various aspects of scientific performance, including innovation. In other words, time pressure has a positive relationship with innovation and performance, contrary to the general assumption that scientists require a relaxed environment in order to carry out their work.

Twenty-two percent of students on the Creative Thinking course received a lower mark for the time-limited exercise than for the continued assessment of the course; this percentage was lower (12%) for students on the Speaking and Writing course. As shown in Figure 3, a neutral relationship (i.e., the *Kronos* mark is the same as the final mark) is dominant, but the percentage of students on the latter course who got better marks with *Kronos* is more than double the percentage of those who received worse marks.

CONCLUSIONS AND CONSIDERATIONS

Given the similar levels of student participation in these surveys, the comparative analysis that is the purpose of this study is feasible and allows us to reach valuable conclusions for the future implementation of the *Kronos* tool (for exercises with different teaching objectives or with different temporal parameters). To summarise, the main conclusions can be included in these key points:

- **Similar caution in terms of time management.** There was a similar pattern of caution independently of the time given to do the exercise. Thus, it can be said that the vast majority of students are cautious and manage their time responsibly so that they do not need to exceed the time limit. Students on the Creative Thinking course were given 20 minutes and used an average of 17.14 (ratio of 0.85); students on the Speaking and Writing course were given six hours and used an average of 4.84 (ratio of 0.8).
- **Pressure without precision.** None of the students thought they had been given too much time to do the exercise (the majority considered that the pressure was "sufficient"), but it is striking that between 19% and 25% of students were mistaken when it came to remembering how much time they had been given to do the exercise.
- **Assumption of responsibility.** Since the percentage of students exceeding the given time for completion is higher than those who deemed that they had not been given enough time, it can be deduced in these cases that students were aware that their time management had been inadequate.
- **Time pressure is not negative; many people like it.** In global terms, time pressure has a neutral relationship with academic performance. Furthermore, contrary to the preconceived idea that some lecturers expressed in the questionnaire used to design the application, students find the somewhat stressful experience of carrying out a time-limited test stimulating, as they are accustomed to more conventional dynamics in the virtual environment. For example, one student said:

> *"I must say that I thoroughly enjoyed the experience. I'm still thinking about it today and I am still coming up with new ideas, not only for this exercise but for all the other ones as well... I have a continuous flow of ideas with no end in sight".*

The comparative analysis has provided insights with which to continue working, although future replications of the study should take into account the following limitations and considerations:

- The reliability of research on the relationship between time pressure and performance would likely increase if the results of a group under time constraints were compared with those under the usual pressure for the same type of test.
- The analysis should separate the results according to the objectives of the exercise. As shown, in the exercise that measured creative flow, more students maintained or worsened their performance compared to those who improved it; in the memorising exercise, on the other hand, the students with worse results under time constraints were a minority as compared with those whose results were the same or better.
- The total time to complete the exercise should also be taken into account, since the pressure varies if you are given twenty minutes or six hours. Therefore, a future line of research might maintain the same time pressure and change other variables (for instance, the teaching objective).
- Finally, consultants should define evaluation criteria. For instance, they should determine whether an exercise given in late should be

given a fail mark or establish a timeframe scale for raising or dropping marks.

In addition, it would be convenient to verify whether the degree of time pressure acceptance of each student relates to a particular result, i.e., whether the students who improve their performance with a time-limited test are the same ones who enjoy racing against the clock in other areas of life.

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REAL-TIME POLITICAL NEWS: DESIGNING INFORMATION FLOWS IN AN ONLINE SCENARIO

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Real-time political news: designing information flows in an online scenario

ABSTRACT

The article describes a case study: the design and delivery of a university media course on the changing forms of communication and mediated political participation in liberal democracies. The course takes a heuristic, immersive and authentic assessment approach to professional media education. It works from the premise that participation in scenario-driven simulated public events, with students in the roles of journalists, politicians, support staff and civil society actors, deepens professional and democratic understandings about what is at stake for democracy in digital culture's acceleration of political and public communication. The role-play, set in a fictional Westminster-style democracy, occurs at a time when access to public information has broadened, and Web 2.0 technologies have impacted on the speed, transparency and accountability in journalism and political practices. The aim is to replicate the quickening flows of political information and their viral nature; and to understand significant media-political relationships; the ideologies and affiliations of opposed news institutions; and political networks' competition for influence. Course features include a theoretical preparation and writing praxis period, augmented by guest lectures from media and political representatives. Students then enter the Digital Information Flows Scenario (DIFS) in a fictional polity, *Incognita*, and act within their role and group affiliations, circulating and responding to texts in various formats for different readerships. What can be achieved using this approach?

KEYWORDS

media, democracy, e-SIM, authentic role-play, information flow

1. INTRODUCTION: DIGITAL INFORMATION FORCES AT PLAY

Not all the outcomes of digital change have been good for Australian journalism or for the health of the country's political culture. On one hand, news perspectives have diversified with online versions of print newspapers, and this is a good development as a democracy is best served when its citizens have access to a range of views and values online, especially if local access to news is limited to one or two sources. Digital culture has also improved the transparency of government: websites have increased transparency and accountability, and citizens expect to be invited to participate in policy consultations. Parliamentary debate is webcast live, familiarising the polity with democratic arrangements and practices. On the other hand, media pay walls prevent full access for some potential subscribers, resulting in elite and niche conversations about public matters, where once national news in print or on television were the key influencers in national debates. Audiences do not routinely turn in great numbers to political broadcasts out of election periods, unless there is an issue of significance – or notoriety – claiming their attention. The imagined community model (Benedict Anderson's print nationalism) is profoundly altering, as once-captive consumers move online, exercising more choice and even producing their own versions of events on comment pages and in citizen journalism. News distribution traditionally needed to dovetail with daily print news or television programming schedules. The digital revolution has rendered those requirements almost redundant. Professional life is not easier for media workers as a result, as the Internet speeds up information flows; and journalists are thought of as autonomous: required to report, write, edit, and publish to different platforms 24/7. Complex and contradictory forces are at play making this a time of transition for journalism and political practice in democracies.

Mainstream industry change in the media sector has been dramatic (The State of the News Media, 2011), but not the death predicted years ago. Instead the sector survives by adapting and innovating. Over a decade of diminishing print circulation figures mean that proprietors struggle to find an effective business model, and have redesigned newsrooms to match the reduced and re-skilled workforce in an attempt to meet the realities of multiplatform competition coupled with an abundance of information. A NewsLtd editor states,

> *I knew something had to change, I wasn't sure what it was, but we had a long hard look at the newsroom and we realised it was a pyramid based (with decisions) flowing from the top to the bottom. That may have been fine a century ago but it just wasn't working now. It was inhibiting communication. The amount of information flowing onto the floor was doubling every year, and it was inhibiting our capacity to do the job properly (Mansell, quoted in Evershed, 2011)*

The 'journalism of the future' debates, proliferating since the arrival of online media, now incorporate the radical changes to integrated and flatter commercial media newsrooms with a small staff of key journalists and a host of 'general' reporters. Horizontal reorganisation is productive for media management and even journalists, but it also flags that society's interpreters are under pressure to adapt to extreme pressures. As news cycles speed up, the depth of political and policy coverage is affected by the lack of time to research, compare and deliberate before turning on the media megaphones. Add these factors to subscriber pay walls, reductions in local content, and a trend to tabloidization and together they are capable of altering the democratic nature of the public sphere of debate.

Social networking is another phenomenon impacting strongly on 'heritage' media's role in democracy. Twitter is seeding and re-seeding news agendas as public figures take to micro-blogging to bypass the potentially negative or speculative interpretations journalists might make of their conduct.

The Australian Prime Minister has nearly 227,000 followers; her rival Kevin Rudd has over 1 million: this seeds the substance of a story by a political reporter in The Age newspaper (Wright, 2012). Social media increases the velocity, noise and confusion of public conversations with the result that media storms and moral panics are emerging more frequently. The years from 2009-2012 provide evidence of media events and political scandals based on the perceived personal failures of elites: politicians and journalists. Two contemporary instances are illustrative: a sitting MP used parliamentary right of reply to accuse the opposition and mainstream media of attacking the 'presumption of innocence' regarding investigations of his actions. Secondly, a 2011 class action won by nine litigants from the indigenous elite against the prominent NewsLtd journalist and blogger Andrew Bolt, using the Racial Discrimination Act (Quinn, 2011; Connor, 2011), demonstrates - through the resurgence of the 'freedom of the press' debate accompanying coverage - a national unease about apparently shifting boundaries in media practices. Although competition for the news and commentary space comes increasingly from non-journalists, freelance writers, activists, public relations sources, citizen bloggers and politicians and their staff, and e-participation by the polity has never been more possible, it is ironic and possibly consequent upon greater transparency and access that the standard of media reportage and political commentary is being seen as deficient. The Australian government moved swiftly to institute the local Independent Media Inquiry (2011) to review the effectiveness of Australian media self-regulation, following the exposure of criminal activity in the UK phone hacking scandal by Murdoch's NewsCorp, which has dominant holdings in Australia (Phone Hacking Scandal, 2011). Its findings have not been received well by the sector nor by supporters of unrestricted freedom of speech.

What does this complex of factors mean for media students and their educators? The craft of journalism was once taught with fairly reliable knowledge of the likely demands, requirements and typical formats of the newsgathering profession. Now formats, modes, audiences for and definitions of journalism are altering. The speed and provenance of digital information are among the 'problems' of political journalism.

These realities, allied with the public cynicism about political figures, mean that educators need to take a different approach. The following experiment in authentic simulation of professional tasks and roles was designed to investigate how students can be prepared for joining professional communities of practice, yet allow a space for self-reflexivity and critical approaches to real-time news practices. Academics need to consider, as Lombardi (2007, p.9) notes on authentic learning, eight critical factors: course goals, content, instructional design, learner tasks, instructor roles, student roles, technical affordances and assessment. These factors are described below, as they play out in relation to the DIFS blended E-SIM.

2. MEDIA DEMOCRACIES AND E-PARTICIPATION 2010-2012

2.1 GOALS AND CONTEXTUAL FACTORS

The third-year media course *Media Democracies and E-Participation* (*MDEP*) which hosts *DIFS* goes into its fourth iteration in 2012. It is

taught as part of a professional award, the Bachelor of Media, in a research university with long-established face-to-face teaching traditions and, as yet, patchy support for online course development. In 2009, the university's Centre for Learning and Professional Development (CLPD) provided online course designers to work with academics interested in developing their courses for 2010 delivery. The aim of the e-Enhanced Learning and Teaching Project (e-ELTP) was to add special portable trial features to existing courses, by using the content management system (CMS), MyUni, a locally governed customisation of Blackboard (http://www.blackboard.com). MyUni content includes: course information (announcements, email, and lectures - both text and recorded); a full grade centre accessible to student view; tutorial group management tools (groups, Respondus for e-tests, TurnitIn for plagiarism detection; and an online assignment dropbox, SafeAssign); limited course owner customisation features (colours and selections from the toolbox); and a limited range of social tools (wikis, blogs).

Few 'liquid content' features are visible in posted content, as security and functionality are privileged over the usual graphic design features found on most contemporary sites. Internal research shows that the *MDEP* cohort (in 2010) reported their usual practice was to visit MyUni once a day (Griffiths, 2010). Purposeful pedagogic or extensive use of MyUni's social or interactive features is not sufficiently subscribed, so the initiative aimed to change participation in online learning by showcasing selected first-year and third-year courses.

2.2 IDENTIFICATION OF PROBLEMS IN THE 2009 ITERATION OF MDEP

The first delivery of the *MDEP* course in 2009 (without the e-SIM) proved ambitious for two reasons. Students quickly identified the limits of platform tools and insufficient capacity for interactivity to simulate news circulation or newsroom editorial processes. Secondly, the range of unfamiliar assessment choices, the offer to negotiate details of assessment tasks, or to find equivalencies, tested the willingness of students to experiment. Instructors aimed to address students' general knowledge, work-readiness, resilience and adaptability to the speed and competition of professional routines, and to the variety of likely work assignments. e-ELTP offered a co-creative space where academic convenors and technical designers could collaborate on trialling portable tools designed to match course aims in situational learning. 'Getting students up to speed' was the goal.

2.3 INSTRUCTIONAL DESIGN: INITIAL PROCESSES

MDEP aims to develop a sophisticated understanding of the complex influences on, and relationships made between, media practitioners, citizens, and politicians in a digital democracy. The pedagogic challenge is to engage with students' acculturation to media practices as consumers, followed by critical attitudes and the practical capacity to function professionally and ethically within a media landscape dominated by celebrity news and a focus on negative aspects of political culture. A learning outcome is heightened awareness of political rhetoric and spin. It is known that the effect on democratic participation of negative political campaigns is to increase political cynicism (Dermody & Scullion, 2003).

Online trial components needed to reflect relevant aspects of digital politics as well as media realities: simulated event creation and real-time reportage; the value of visualisation; video image upload and analysis, an online architecture which demonstrated the powers and limits of public speaking positions;

gatekeeper versus unmediated access to readerships; increased desire for public transparency; online anonymity, provenance and identity questions; the regulation of free speech; the mediation and redistribution of information; the private and public spaces of the Internet. Along with questions of accountability and 'public interest' information, the online space would be required to illustrate, albeit fictionally, journalism's role in democracy. It was to blend lecture and tutorial content with e-activities. The online design, developed over a series of meetings, included use of anonymised user IDs for an eSIM scenario in which governance tools would enable student peer access to full editorial and page management functions - a first step to an immersive, empowered experience.

2.4 CONTENT AND STRUCTURE – OPPORTUNISM, CO-CREATION AND FLEXIBILITY

Collaborator aims coalesced in the content choices and course structure: the first e-SIM coincided with a state election in which a moral panic about a politician's alleged behaviour dominated political coverage, putting comparisons of policy platforms second. At the Federal level, the release of an 'open government' discussion paper (Engage 2.0) and mandatory internet filtering proposals were utilised as well as as, at international level, Wikileaks' release of the US military video footage, which brought the whistleblower site and Julian Assange, an Australian citizen, to global attention. Such events provided scale and complexity in the e-SIM, as selected issues could be worked out through mirror techniques in the simulated polity.

Part 1 of the course analyses emerging online communication practices. Supplementing theoretical frameworks with accounts of experience of media, guest speakers included federal and state politicians, strategic communications officers, journalists and digital media specialists. The professional practices taught included news writing, online moderation, press release writing, television-style panel debates, citizen journalism, and the political use of social media like *Facebook* and *Twitter*.

In the eight-week preparation period, the assignment of E-SIM roles took place. Six tutorial groups were assigned group affiliations by the instructor, but could choose their own roles and authentic organisational structures. The groups included a social progressive government; a conservative parliamentary opposition; a left-leaning media group; a conservative media group; a public sector group of research organisations and telecommunications agencies; and a civil society group of citizens and activists including several citizen journalists in a simulated blogosphere.

Within that general framework, students were asked to devise appropriate individual role remits, chose a fictional name and write a biography to be published on the Who's Who directory of citizens in the e-SIM. In the private biography sent to teaching staff, students nominated a fact about their public figure, with potentially negative consequences if made public. The course reader is prescribed, and used to generate tutorial e-activities.

Table 1. Course reader topics

1	Journalists as mediators
2	Journalism as a democratic practice
3	Transcripts: event-driven political speeches
4	Practices, power and relationships
5	Democracies, deficits and ideologies
6	Viral communications: spin, celebrity, gossip
7	e-Participation: the political impact of social networking
8	Open government, new technologies

Part 2 involves the immersive e-SIM. Online activities run on a specialised *DIFS* site augmented by the students' use of their own social media sites, and private emails. The e-SIM is triggered by the entry of all participants into *DIFS*, where the crisis scenario details are posted. From then on all students are in role. Offline, tutorials are dedicated to strategic communications meetings, and text production and circulation. In the final weeks, the whole polity meets in real time to present at three off-line Summits where the role-players reveal their previously anonymous online identities to debate government and opposition digital policies, or report on digital policies presented. Votapedia, a free polling service from the Commonwealth Scientific and Industrial Research Organization (CSIRO) with immediately displayable results, is used for comparisons of mobile and online polling on the issues presented at the Summits. The emphasis throughout is on learning through praxis and reflexive exercises.

2.5 LEARNER TASKS, INSTRUCTOR ROLES, STUDENT ROLES

The tasks of the learner are, firstly, to ensure adequate theoretical and practical preparation have taken place: understanding what is at stake in industry change for democracy; reading and commenting on a government digital policy paper; acquisition of an understanding of communication formats and uses; and demonstration of an ability to replicate them for target audiences. Secondly, the completion of individual and group oral, written and organisational tasks as dictated by roles in the eSIM polity, *Incognita*.

The name is both a reference to Aristotle's imagination of Australia as a great, undiscovered land in the south, thought to balance the northern landmass, and to the unknown outcomes of the flows of information in *DIFS*. In all aspects of history, geography, demography, social, media and political arrangements, *Incognitan* realities reflect Australian realities. For some participants, this represents a 'just-in-time' acquisition of information, redressing a potential deficit in general knowledge. Basing the polity on Australia also quickly creates shared cultural capital about how the E-SIM polity works. The tutorial lab setting allows for instantaneous online fact checking by students. The research e-activities reinforce that accuracy (not getting the story first) is an essential professional skill that, if abused, carries legal, reputational and professional consequences. The details of media industry change; the 'machinery of government' (now available as a mobile phone application); the differences between political parties and ideologies; the press gallery's symbolic and professional function; and examples from political commentary are used.

A briefing is given detailing recent *Incognitan* events, and flagging the likely policies for later public sphere debate. Student tutorial groups then begin their collective work. Within each group, 'Government', 'Opposition', 'Media Left' and 'Media Right'; 'Digital Business' sector organisations; and 'Civil Society', the appropriate hierarchical or flatter organisational structures are worked out, with some group members assuming leadership, spokesperson, or support roles. In Government, for example, party names, political orientations, party structures are decided; and ministerial and support staff functions and powers distributed as unequally as they are in any political party. Australia has two major news companies, NewsLtd and Fairfax, and Media Left and Right groups replicated prominent print tabloid and broadsheet newspapers, and their online versions; an internet television station; entertainment and independent news commentary. Basing corporations on Australian companies reduced the need to invent organisational cultures and readerships, and increased the portability of learning outcomes.

The potential for defamation claims by real organisations and public figures arising out of a learning activity was also reduced.

Instructors' tasks are to inform, suggest, facilitate and sometimes manage group interactions, as role-players move online and networking begins between groups. The academic instructor provides of a list of potential reactions to the trigger event, and facilitates the scoping of activities, relating E-SIM choices to real-world events and consequences. The flow of texts produces the *Incognitan* polity. It is up to students to check the provenance and relative importance of information in the digital noise. The MyUni 'site views' make participation visible and give certain flows accumulating significance.

The 2010 Summit scenario was based on citizens' rights and reaction to Australia's mandatory Internet filtering proposals. The *Incognitan* whistleblower site, Wik-I-Leaks (WIL) acted as a source of information 'noise' from which real-time news coverage flowed. The W-I-L site was the only one which staff managed exclusively throughout the e-SIM, selectively leaking private facts about *Incognitan* public figures already supplied in Part 1 assessment. As in contemporary Australia, subsequently journalists, party insiders and other sources 'leaked' information. The co-creation features afforded opportunities for peer discussions on media practices and professional ethics.

3. TECHNICAL AFFORDANCES

3.1 ANONYMOUS LOGINS

Anonymity online matched 2010 DIFS themes. Each student received an email with joining *DIFS* instructions, a random ('r') ID and password (which would be personalised) to use in addition to their official university 'a1xxxxxx' identifiers. A useful tool, it was chosen to diffuse the potential for personalisation and acrimonious political disputes to migrate from DIFS into real student-student relationships. Anonymised online accounts proved difficult to implement and manage within the university system. At the time, almost in step with government proposals for mandatory filtering to be conducted by ISPs – and public debates about anonymous user comments online – the university firewall firmed up institutional protections, blocking access to a list of restricted websites. High privacy settings; large numbers of annually changing users; different levels of access; and a secure data-rich environment can appear anomalous to students with notions of use and privacy derived from social networking sites. Experiencing CMS difficulties made it easier for students to compare online governance in university data systems with those in external settings such as media organisations, government and more familiar social network sites. 'R' andom access was time-consuming for site managers. It was not simply a permissions issue: once the lists of random numbers and original passwords had been generated, the matching of real names and fictional names was completed manually, and involved cross-checking with the grade centre listing of names. Earlier university e-SIMS had used group access, but the nature of DIFS required individuals to be subscribed.

As posting was anonymous, however, students experimented with role expectations and responsibilities freely, learning the limits of acceptable conduct.

3.2 'WHO'S WHO': THE INCOGNITAN DIRECTORY (A PUBLIC AREA, WITH INDIVIDUAL EDITING RIGHTS)

Straight after login, students published role biographies to an *Incognitan* 'Who's Who.' Again, this experiment, while it suited DIFS' goals, was a test bed for the online design team and aimed

at trialling the future viability of individually managed student homepages. The directory was a publicly accessed space, an aggregation of individual homepages. Searches for individuals went through group pages. Thus, all Media Left organisations occupied one group, as did all Opposition members. Public views of the directory provided essential peer information, and established polity relationships quickly. Fact checking and political profiling was more manageable for journalists. Individual homepage editing functions were given to each player. Most students uploaded pictures of favourite celebrities to add status to fictional names and biographies. The sharing of edited biographies (already graded in Part 1 of the course) raised the overall professionalism of the published outputs, and became a source of witty real-time exchanges, within MyUni, face-to-face, and on external sites.

3.3 RULES FOR UNEQUAL ACCESS (AND POWER RELATIONSHIPS) IN, AND BETWEEN, GROUPS

Establishing levels of communication privilege, as an authentic simulation of real relations of power, worked well as an experiential technique. Usually all students are guaranteed equal online access privileges, but access to areas of DIFS distinguished between less/more powerful groups and role-players using blogs, wikis and group management tools to reinforce the learning outcomes (see e-ELTP Media Examples (2011) for the group disposition in 2010).

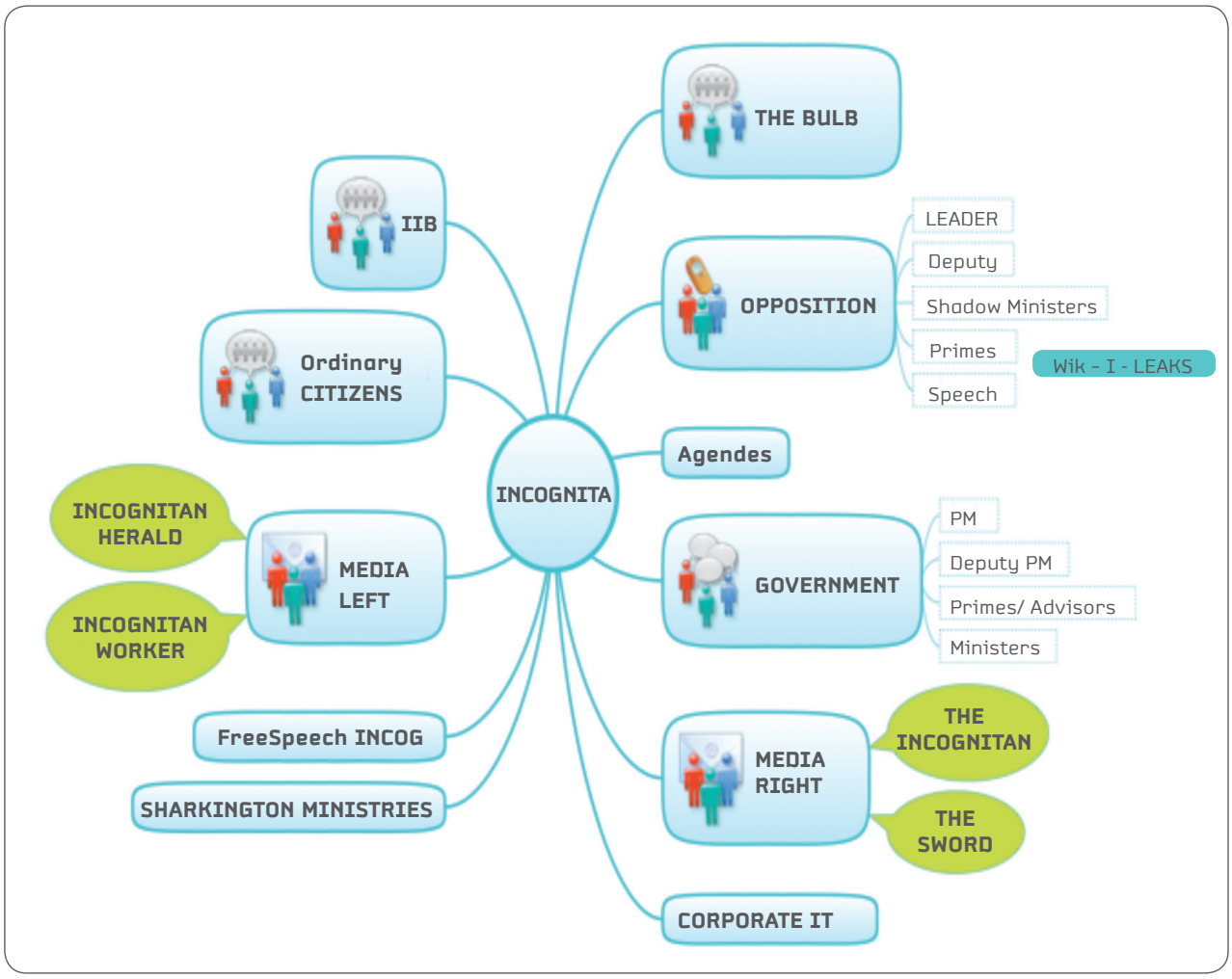
Political parties used private settings to strategise, and public websites to campaign. Hierarchical party relationships, represented by groups of ministers, parliamentarians, press officers, researchers, and speechwriters were agreed within groups.

Civil society organisations were smaller and did not have ready-made media communications staff or ease of access to media outlets. Members had group messaging and public posting permissions, but were not allowed to 'own' a shared visible public space. They were therefore required to use press releases, go through journalists as mediators, be part of 'vox pop' video, or write letters to editors or their members of parliament. Going through mediators slowed some participants down, until they found ways of establishing their own distribution platforms. The *Independent Incognitan Blogosphere* (IBB) had 'comment' tools attached, and was open access for viewing and subscription by all citizens. IBB became the default online publishing space for those who were late DIFS entries, felt disorientated by the speed and variety of information, or were averse to group-work.

Conversely, all media organisations had privileges, publishing to branded platforms, where designated editors were empowered to refuse publication to journalists, politicians, or citizens; choose letters and commentary; and edit work before publishing.

To offset disparities in additional work, assessment equivalences were negotiated for, for example, the editors and party leaders, (usually reduced word lengths for assignments were offered, but rarely taken up). All students were allowed to use 'private' settings within MyUni for group email to organise their work, but more adventurous (or impatient) students chose to migrate out of the MyUni system, returning to familiar social networking territory by setting up specialised Facebook or false Twitter accounts under their fictitious names. These became an authentic, if unplanned, feature of later *DIFS* too, as students found it easier to post YouTube video footage, create wordpress blogs, and use Twitter hashtags to comment live on presentations at the policy summits than upload to MyUni ('Chloe Thompson', 2011; 'Virginia Fierce', 2011; 'Jules Townsend' 2011).

Figure 2. Visualisation of Incognita



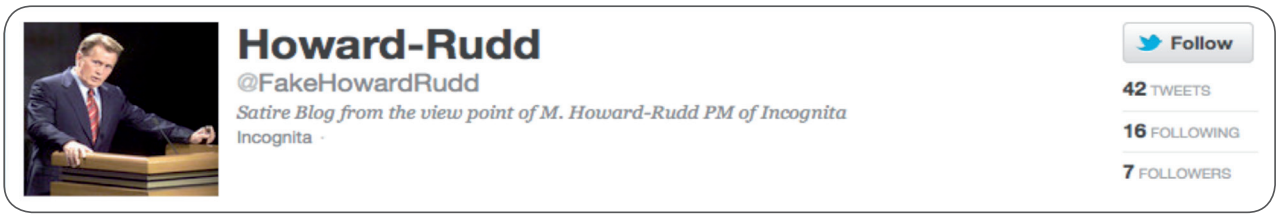
Group competition demonstrated itself in visual branding exercises, networking with affiliated groups, in provocative publicity, or a barrage of political speeches and news commentary. A typical 'sticky' site was 'Government', with over 1550 views over a three-week period. Opposition pages had high individual views, depending on professional authenticity and content. The number of rapidly growing page views over the pre-Summit period demonstrated that some events required at least passive student attention, thus replicating real-life media storms. The Comment pages were slow to build up participation over such a short period but interactivity between some groups and individuals was high.

4. MEDIA EVENTS AND REAL-TIME NEWS

Face-to-face attendance at the three policy Summits (media events) is compulsory. Overall *DIFS* participation is worth 15%. 'Government' held the first community cabinet and, over the next week, before 'Opposition' has 'right of reply' the flow of texts intensified. Journalists from, for example, 'The Matinee Buzz', 'The Incognitan', and 'The Daily Worker' acted as press gallery (Incognita's 'Meet the Press", 2011)

Confidence in roles had largely been established by the Summits. Doorstop

Figure 4. Fake Twitter account, @FakeHowardRudd



interviews with politicians or their interlocutors were held outside a Press Club, and later posted to YouTube. The two international students running an Internet TV station made seven-minute update news reports shown prior to each summit. Instant polling at the end of each Summit used the free Votapedia platform (CSIRO) and gave a snapshot of the mood of the citizen assembly. Press releases, and interviews with key personnel, were published on political party websites; commentators published opinion. The third Summit given over to media, activist and citizen journalist retrospectives took a television panel format, simulating the ABC's top public affairs program Q&A. A newspaper front page simulating *The Australian*, Australia's NewsLtd daily broadsheet, was produced quickly.

The E-SIM benefitted from students' willingness to play by DIFS rules, to experiment, and compete. As with the instructor reaction to technical glitches, players became opportunists, willing to push personal boundaries within a short, intense timeframe. Live tweeting to fake sites occurred during the Summit presentations, demonstrating the influence of social networking in public debate, and connections to mainstream news.

A period in virtual asynchronous space prior to the blended Summit experience, enabled the DIFS 'real-time' news environment to display the nature and speed of information flows and the quality of public interactivity.

5. ASSESSMENT

The course aim was to contextualise the trends in complex information flows through experiential learning, and develop student understanding through simulated participation in political news online and face-to-face spaces. The replication of complex information flows (e.g., from press release or speech to news story, interview, twitter conversation and broadcast interview or blog post), and professional relationships of power, resulted in a multitude of public and private texts being produced. Oral presentations, blog entries, campaign posters, speeches, editorial work, television news, and reportage were popular. Policy documents and research were also produced. Students put all texts (print, online, video, audio) and accounts of their strategic work into a portfolio for grading. *DIFS* accounted for 50% of the marks. Students found negotiating equivalencies a novel experience. An unexpectedly high number of participants had 'lived' *DIFS*, logging on several times a day (exceeding normal practice), and building a professional portfolio of sample texts. Many had not only utilised all communications options, but sought more externally.

6. SUMMARY: FUTURE *DIFS*

Course evaluation results were positive, and indicated *DIFS* was valued for its experiential complexity and depth, its challenges, and the portability of the capacities taught. Reflexive student comments referred to the

usefulness of the experience of producing under sustained and integrated pressures, and their competitive responses to agenda-setting activities by other groups. It led some to decry particular media practices, such as reductive commentary. Free-form student comments noted the creative, flexible nature of the course, indicated personal learning outcomes, while suggesting a tighter organisational structure. Co-creative course practices were thus less well understood.

Technical problems were considered disruptive but, in their way, instructive regarding unreal expectations of professional workplaces. Going outside the university CMS is not endorsed institutionally, so the eSIM experience was the result of adapting to limits, and co-creating the course with designer and student participation during delivery.

Future research will focus on when negotiated learning can most usefully begin, and its limits. In 2012, DIFS focuses on Twitter uses, and the government's privacy policy. The mapping of microblog influence is just beginning (Bakshy, Hofman, Mason & Watts, 2011; Schoon & Cain, 2011). In terms of simulating real-time news, it will be useful to add knowledge of social media metrics to the learning outcomes, as these drive business strategy, as well as influence political culture.

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