

You Tube: Knowledge Management and New Media Services

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This work is about the acquisition, sharing, and dissemination of knowledge using information technology and new media services. This is a landscape whereby collaborative and (co)creative spaces are emerging for engaging in the creation, critical assessment and personalization of "New Media" that can be used for sharing and disseminating knowledge. YouTube, an example of New Media, is a free video-sharing website that has rapidly become a popular way to upload, share, view, and comment on video clips. With more than 100 million people visiting the site per day and more than 65,000 videos uploaded daily, it provides a rich visual resource. This paper will focus on the possibilities of integration New Media services such as YouTube, and creating and sharing knowledge (as an illustrative example of New Media) within a pragmatic framework. Suggestions for the effective integrating of New Media will be researched.

Introduction

Knowledge management deals as much with people and how they acquire, exchange and disseminate knowledge as with information technology and New Media.

New Media and Learning 2.0 approaches can be used as a means to increase academic achievement. Web 2.0 supplies learners and teachers with a wide variety of didactical and methodological tools that can be fitted to their respective learning objectives and individual needs with a positive effect on their performance and achievement. Research evidence suggests that Learning 2.0 strategies can be used successfully to enhance individual motivation, improve learner participation and foster social and learning skills. They can further contribute to the development of higher order cognitive skills like reflection and meta-cognition, increase self-directed learning skills and enable individuals to better develop and realise their personal potential.

Web 2.0 more engaging and playful approaches, provides new formats for creative expression, and encourages learners to experiment with different, innovative, ways of articulating (decoding) their thoughts and ideas. The Learning 2.0 landscape itself is also shaped by experimentation, collaboration and empowerment, allowing learners and teachers to discover new ways of actively and creatively developing their individual competences.

Why should the notion of incorporating New Media and interacting with for example socially distributed and user-created videos (e.g. from www.youtube.com) be important within education? In what ways has the rapid development of digital technologies associated with the

terms New Media and Web 2.0 and their use in education enabled individuals to interact differently within existing and new ecologies of learning? How can we as educators engage with New Media possibilities presented by websites such as YouTube?

1. Knowledge management

Knowledge management is "any process or practice of **creating, acquiring, capturing, sharing and using knowledge**, wherever it resides, to enhance learning and performance in organizations" (Scarborough *et al*, 1999). They suggest that it focuses on the development of firm-specific knowledge and skills that are the result of organizational learning processes. Knowledge management is concerned with both stocks and flows of knowledge. Stocks included expertise and encoded knowledge in computer systems. Flows represent the ways in which knowledge is transferred from people to people or from people to a knowledge database. Knowledge management has also been defined by Tan (2000) as: 'The process of systematically and actively managing and leveraging the stores of knowledge in an organization'. Knowledge management involves **transforming** knowledge resources by identifying relevant information and then **disseminating** it so that learning can take place. Knowledge management strategies promote the **sharing of knowledge by linking people with people**, and by linking them to information so that they learn from documented experiences.

Knowledge can be stored in databanks and found in presentations, reports, libraries, policy documents and manuals. It can be moved around the organization through information systems and by traditional methods such as meetings, workshops, courses, "master classes", written publications, **videos**. The Internet provides an

additional and very effective medium for creating, sharing, communicating knowledge.¹

Since 2003, the Internet has seen impressive growth in end user-driven applications such as *blogs*, *podcasts*, *wikis*, *social networking websites*, *search engines*, *auction websites*, *games*, *Voice over IP* and *peer-to-peer services*. Together, they are referred to as *social computing* (or “Web 2.0”), as they exploit the Internet’s connectivity to support the networking of people and content. The user is an integral part and co-producer of all the elements of the service delivered, whether it be content (blog, wikis, Flickr), taste/emotion (Amazon, de.li.cious), goods (eBay), contacts (MySpace), relevance (Google pagerank), reputation/feedback (eBay, TripAdvisor), storage/server capacity (P2P), connectivity (wifi sharing, mesh networks) or intelligence (business social computing).²

2. New media

New Media is a buzz word that refers broadly to an emerging convergence of digital communications technologies within co-creative online social spaces. A consideration of the term “New Media” can also be framed within a contrast to “old media”. Old media defined as incorporating forms of communication prior to the digital world such as radio, television and printed material and being predominantly linear in nature.

The term New Media has also become to a degree a catch-all phrase and as such is defined within the context of this paper to be inclusive of two consistent characteristics. Uniquely individualized information that can simultaneously be delivered or displayed to a potentially infinite number of people, and, all authors involved (e.g. publishers, broadcasters, students, educators, consumers) share equal or reciprocal control over content. Also noted as central to a *P. Duffy* consideration of the term New Media is that it is often associated with and considered to be a superset of emerging technologies relating to Web 2.0.

2.1 Web 2.0

Web 2.0., a phrase coined by O’Reilly Media in 2003, refers to a perceived second generation of web-based interactions, applications and communities. It is considered to be inclusive of a shift from a World Wide Web that is “read only” to a Web that is being described as the

“Read Write Web” (Gillmor, 2007). Instead of content that was for the most part static, we are now seeing the ability by users to remix content in different ways, in order to suit contextual needs. The Web is evolving to become more like an area for social and idea networking. Students negotiate meanings and connections within Web 2.0 social spaces or idea networks, exchanges bits of content (media), creating new content, and collaborating in new ways in the individual and authentic creation of New Media.

In summary, O’Reilly (2005) states that, .Web 2.0. stands for the idea that the Internet is evolving from a collection of static pages into a vehicle for software services, especially those that foster self-publishing, participation, and collaboration.³

“Web 2.0” refers to the range of digital applications that enable interaction, collaboration and sharing between users. These digital applications are used for blogging, podcasting, collaborative content (e.g. wikis), social networking (e.g. MySpace, Facebook), multimedia sharing (e.g. Flickr, YouTube), social tagging (e.g. Deli.cio.us) and social gaming (e.g. Second Life) (cf. Pascu, 2008).

Asian countries lead in the usage of social computing with more than 50% of Internet users across all applications, followed by the US (with about 30% of Internet users) and Europe (with about 20-25%). Creation, use and adoption of social computing applications have been growing strongly since 2003. However, growth has slowed down lately, indicating that the diffusion of social computing is entering the maturity phase. (Pascu, 2008)

“Web 2.0” applications allow users to communicate and collaborate in diverse ways and in a variety of media, which also helps learners to act together and build knowledge bases that fit their specific needs (cf. Owen *et al.*, 2006). The following applications are the most relevant for learning.

2.2 Social Networking Services

Social Networking Services. Social networking services can be broadly defined as internet- or mobile device-based social spaces, designed to facilitate communication, collaboration and content sharing across networks of contacts (Childnet International, 2008; Cachia, 2008). They enable users to connect to friends and colleagues, send mails and instant messages, blog, meet new people and post personal information profiles, which may com-

¹ Armstrong, M., (2006), *A Handbook of HRM practice*, 10 th Edition, London and Philadelphia: Kogan Page, p. 174

² Redecer, C., et al. (2009), *Learning 2.0: The Impact of Web 2.0 Innovation on Education and Training in Europe*, Luxembourg: Office for Official Publications of the European Communities, p. 19

³ Kwan, R., et al. (2008), *Enhancing Learning Through Technology, Research on Emerging Technologies and Pedagogies*, London: World Scientific Publishing Co. Pte. Ltd., p 33/35

prise blogs, photos, videos, images, and audio content (OECD, 2007; Cachia, 2008). Prominent examples of social networking services include:

- **Facebook and MySpace**
(for social networking/socialising),
- **LinkedIn** (for professional networking), and
- **Elgg2** (for knowledge accretion and learning).

Social networking systems allow users to describe themselves and their interests, connect and communicate with others, and set up groups on dedicated topics.

In October 2007, there were over 250 million profiles on social networking sites. On a monthly basis, using social networking sites is the third most popular online activity in Europe (Pascu, 2008). Recent surveys in the US found that 55% of US online teens have created personal profiles online, and 55% have used social networking sites like MySpace or Facebook; 9-17 year-olds reported spending almost as much time on social networking sites and other websites as they do watching television (9 compared to 10 hours per week) (Attwell, 2007; Childnet International, 2008). Interestingly, the findings indicate that education-related topics are the most commonly discussed, with 60% of the young people surveyed talking about education-related topics and 50% discussing their schoolwork (Childnet International, 2008).

Blogs. “Weblogs” or “blogs”, a term coined by Jorn Barger in 1997, are online public writing environments, which enable a single author or a group of authors to write and publicly display articles (called posts), which are listed in reversed chronological order (Ellison & Wu, 2008; Anderson, 2007). Depending on the author’s wishes, blogs can include **visual, audio and video content**, as well as features such as **links to other blogs**, information about the author, and comments from readers (Ellison & Wu, 2008; OECD, 2007). The large number of people engaged in blogging has given rise to its own term – blogosphere – to express the sense of a whole ‘world’ of bloggers operating in their own environment (Anderson, 2007). For searching within the blogosphere, an array of blog and RSS search services have appeared, with different foci depending on user needs and information architecture (Alexander, 2006).

Wikis. A wiki is a website that allows users to collaboratively add, remove and otherwise edit and change content, usually text (Owen *et al.*, 2006; OECD, 2007). The most prominent example of a wiki is Wikipedia, a collaboratively - created online encyclopaedia. Since its creation in 2001, Wikipedia has grown rapidly into one of the largest reference websites, attracting at least 684 million visitors yearly by 2008. There are more than

75,000 active contributors working on more than 10,000,000 articles in more than 250 languages. The English version of Wikipedia is the biggest, with 2,573,854 articles in October 2008.⁴

Tagging and social bookmarking

Tagging and social bookmarking. A **tag** is a keyword that is added to a digital object (e.g. a website, picture or video clip) to describe it, but not as part of a formal classification system. One of the first large - scale applications of tagging was seen with the introduction of Joshua Schacter’s del.icio.us website, which launched the ‘social bookmarking’ phenomenon.

Social bookmarking systems share a number of common features (Millen *et al.*, 2005): They allow users to create lists of ‘bookmarks’ or ‘favourites’, to store these centrally on a remote service (rather than within the client browser) and to share them with other users of the system (the ‘social’ aspect). These bookmarks can also be tagged with keywords, and an important difference from the ‘folder’- based categorisation used in traditional, browser-based bookmark lists is that a bookmark can belong in more than one category. Using tags, a photo of a tree could be categorised with both ‘tree’ and ‘larch’, for example.⁵ This process of organising information through user-generated tags has become known as ‘folksonomy’.

The types of content that can be tagged vary from:

- blogs (Technorati);
- books (Amazon);
- pictures (Flickr);
- podcasts (Odeo);
- videos (YouTube), to even tagging of tags (Pascu, 2008; Anderson, 2007).

Different social bookmarking sites encourage different uses: some sites encourage more playful and personal tagging, for example **Flickr**, the phototagging site; while others afford a more deliberate style of tagging with a very clear idea of a specific audience, such as the academic sites Connotea or CiteULike (Owen *et al.*, 2006; Vuorikari, 2007).

Media Sharing Services

Media Sharing Services. Media sharing devices store user-contributed media, and allow users to search for and display content. Examples include:

⁴ Redecer. C., et al. (2009), **Learning 2.0: The Impact of Web 2.0 Innovation on Education and Training in Europe**, Luxembourg: Office for Official Publications of the European Communities, p 19 -20

⁵ Anderson. P., **JISC Technology and Standards Watch**, Feb. 2007, p 10

- Flickr (photos);
- iTunes (podcasts and vodcasts);
- Slideshare (presentations);
- DeviantArt (art work);
- Scribd (documents) and
- YouTube (video).

Posting photographs online is one of the most popular online content creation activities, driven by increasing popularity of digital cameras and mobiles with cameras. More than 1 billion photos (1 million updated daily) are uploaded in photo sites. Social tagging is rising and millions of photos have been tagged in Flickr (1 million tags are added per week in Flickr) (Pascu, 2008).⁶

Podcasts and Vodcasts. Podcasts are audio recordings, usually in MP3 format, of talks, interviews and lectures, which can be played either on a desktop computer or on a wide range of handheld MP3 devices⁷(example - http://www.eslpod.com/website/index_new.html), while vodcast are online delivery of video (example - <http://www.vodcasts.tv/vc.php>).⁸

Podcasting allows listeners to conveniently keep up-to-date with recent audio or video content; vodcasts are video versions of podcasts (online delivery of video). The estimated number of podcasts in 2007 was over 100,000, when only three years earlier, there had been fewer than 10,000 (Pascu, 2008). **Apple iTunes** hosted over 82,000 podcasts in 2006, representing a 10 fold increase from 2005 (Pascu, 2008; OECD, 2007).

Mobile-casting, i.e. receiving video and audio podcasts on mobile phones, is expected to develop rapidly (OECD, 2007). Compared to other social computing services, however, podcasting is less popular: only around 2% of Internet users in Europe used it in 2007 (Pascu, 2008).⁹

Slideshare (presentations), <http://www.slideshare.net/> allow us to upload and share your PowerPoint & Keynote presentations, Word & PDF documents on SlideShare.¹⁰

DeviantArt (art work), <http://www.deviantart.com/> is an online community showcasing various forms of user-made artwork.¹¹

Scribd (documents), <http://www.scribd.com/> is a document - sharing website which allows users to post documents of various formats, and embed them into a web page using its iPaper format. Scribd currently has more than 50 million monthly users and more than 50,000 documents are uploaded daily. All major document types can be formatted into iPaper including Word docs, PowerPoint presentations, PDFs, OpenOffice documents, and PostScript files.¹²

3. You tube

There were an estimated 42.5 million *videos* on YouTube, 3 million on Yahoo Video, and around 2 million on Google Video and MySpace in 2007. In June 2006, 2.5 billion videos were watched on YouTube, and more than 65,000 videos were uploaded daily.

Online video “consumption” (either streaming and downloading) is one of the most popular online activities worldwide, besides photo-sharing. In Europe, 1 in 3 French people visited a video-sharing website in 2006. Some 70% of the online population downloads video streams, the majority of which, however, comprise professionally produced videos. Below 1% of the visits to popular video sharing sites result in content creation; **only some 0.16 % of visits to YouTube are from “those creative people uploading their videos”**.¹³

YouTube is a popular video sharing website where users can upload, view, and share video clips. Videos can be rated, and the average rating and the number of times a video has been watched are both displayed. YouTube has become an enormously popular form of web 2.0 New Media. A recent article in Wired cites an average of 65,000 uploads and 100 million videos viewed per day on YouTube (Godwin-Jones, 2007). The article explores some examples of the wide variety of video content available on the site and searching through the site will provide ample examples of that diversity.¹⁴ You

⁶ Redecer. C., et al. (2009), *Learning 2.0: The Impact of Web 2.0 Innovations on Education and Training in Europe*, Luxembourg: Office for Official Publications of the European Communities, p 21

⁷ Anderson. P, *JISC Technology and Standards Watch*, Feb. 2007, p 10

⁸ Anderson. P, *JISC Technology and Standards Watch*, Feb. 2007, p 10

⁹ Redecer. C., et al. (2009), *Learning 2.0: The Impact of Web 2.0 Innovations on Education and Training in Europe*, Luxembourg: Office for Official Publications of the European Communities, p 21

¹⁰ Slideshare, Retrieved April 15, 2010 from: <http://www.slideshare.net/>

¹¹ Deviantart, Retrieved April 15, 2010 from: <http://www.deviantart.com/>

¹² Scribd, Retrieved April 15, 2010 from: <http://www.scribd.com/>

¹³ Redecer. C., et al. (2009), *Learning 2.0: The Impact of Web 2.0 Innovations on Education and Training in Europe*, Luxembourg: Office for Official Publications of the European Communities, p 21

¹⁴ Kwan. R., et al. (2008), *Enhancing Learning Through Technology, Research on Emerging Technologies and Pedagogies*, London: World Scientific Publishing Co. Pte. Ltd., p 33/35

Tube base is broad in age range, 18-55. 51% of users go to YouTube weekly or more often, and 52 percent of 18-34 year-olds share videos often with friends and colleagues (YouTube Fact Sheet).¹⁵

Using YouTube

Video can be a powerful educational and motivational tool. However, a great deal of the medium's power lies not in itself but in how it is used. Video is not an end in itself but a means toward achieving learning goals and objectives. Effective instructional video is not television-to-student instruction but rather teacher-to-student instruction, with video as a vehicle for discovery.

YouTube is increasingly being used by educators as a pedagogic resource for everything from newsworthy events from around the world to "slice-of-life" videos used to teach students within an ESL (English as a Second Language) course. From instructional videos to an online space to share student authored New Media.¹⁶

Example and illustration:

Many higher education institutions are embracing social networking services to present their institution to society and to connect with current and prospective learners.¹⁷ In December 2008, there were 1,360 university channels on YouTube and many learning-related topic groups.¹⁸

The University of California, Berkley, USA, was the first to make full course lectures freely available through YouTube. It runs its own channel as a YouTube partner and provides over 500 video lessons (hours of content),¹⁹ like in iTunes.²⁰

In addition, on You Tube exist edu channels from different University²¹, and, if FON (Sumorg 2010) have channel on You Tube, then we could record and share our presentation (video) on You Tube, with three simple steps using Camtasi Studio²² (with Bluetooth headset connections).²³

- Record
- Edit
- Share²⁴, or in the future, production of HD lessons in full HD format and designing of a system for broadcasting over network distribution from youngest Microsoft system engineer Marko Calasan.²⁵

Conclusion

Like the early days of the Internet, there is an optimism driving experimentation and exploration across the learning associated with terms like, "New Media", and "Web 2.0". New Media presents educators with shifting frames of reference to consider in relation to teaching and learning. Students and educators now have access to a ubiquitous learning environment where its possible to search for, locate, and quickly access elements of learning that address immediate needs. It is possible to use the New Media to construct and organize personalized, unique interactions with an educational context.

The instructional design and content elements that form a learning must ideally be dynamic and interdependent. The learning environment should enable instructional elements designed as small, highly relevant content objects to be dynamically reorganized into a variety of pedagogical models. This dynamic reorganization of content into different pedagogical models creates a learning system adaptive and personalized to varying student needs.

YouTube is not necessary for good teaching. Within an examination of New Media sites such as YouTube and the discourses that frame their use educators should consider: how do we engage with these technologies, and, how do we teach students to think critically about their potential uses? How do video sharing sites such as YouTube reshape our participation in and out of the classroom? Such questions, of course, do not have simple answers. Suggested is that educators need to go beyond treating video sharing sites as only virtual libraries and instead emphasize the features more aligned with

¹⁵ YouTube Fact Sheet, Retrieved April 15, 2010 from: http://www.youtube.com/t/fact_sheet

¹⁶ Kwan, R., et al. (2008), *Enhancing Learning Through Technology, Research on Emerging Technologies and Pedagogies*, London: World Scientific Publishing Co. Pte. Ltd., p 33/35

¹⁷ Barkley, The University of California, Retrieved April 15, 2010 from: <http://berkeley.edu/>

¹⁸ Redecer, C., et al. (2009), *Learning 2.0: The Impact of Web 2.0 Innovation on Education and Training in Europe*, Luxembourg: Office for Official Publications of the European Communities, p 21

¹⁹ Barkley, The University of California, Retrieved April 15, 2010 from: <http://berkeley.edu/>

²⁰ Barkley on iTunes Retrieved April 15, 2010 from: <http://itunes.berkeley.edu/>

²¹ You Tube Edu, Retrieved April 15, 2010 from: http://www.youtube.com/channels?s=ytedu_mv

²² TechSmith, Camtasia Studio product tour Retrieved April 15, 2010 from: <http://www.techsmith.com/camtasia/features.asp>

²³ 'Bluetooth' is a proprietary open wireless technology standard for exchanging data over short distances (using short length radio waves) from fixed and mobile devices

²⁴ TechSmith, Camtasia Studio product tour Retrieved April 15, 2010 from: <http://www.techsmith.com/camtasia/features.asp>

²⁵ Future trends http://www.youtube.com/watch?v=bEDK00vydik&feature=player_embedded

social interactivity and participation irrespective of place or time. To advocate sharing and discussion of comments, video responses to existing content, flexible possibilities for collaborative assessment and other possibilities of media sharing knowledge and collaboration.

REFERENCES

- [1] Armstrong. M., (2006), A Handbook of HRM practice, 10 th Edition, London and Philadelphia: Kogan Page
- [2] Anderson. P., JISC Technology and Standards Watch, Feb. 2007
- [3] Barkley, The University of California, <http://berkeley.edu/>
- [4] Barkley on iTunes, <http://itunes.berkeley.edu/>
- [5] Deviant art, <http://www.deviantart.com/>
- [6] Kwan. R., et al. (2008), Enhancing LearningThrough Technology, Research on Emerging
- [7] Redecer. C., et al. (2009), Learning 2.0:The Impact of Web 2.0 Innovationson Education and Training in Europe, Luxembourg: Office for Official Publications of the European Communities
- [8] Slideshare, <http://www.slideshare.net/>
- [9] Scribd, <http://www.scribd.com/>
- [10] Technologies and Pedagogies, London: World Scientific Publishing Co. Pte. Ltd.
- [11] Tech Smith, Camtasia Studio product tour, <http://www.techsmith.com/camtasia/features.asp>
- [12] YouTube Fact Sheet, http://www.youtube.com/t/fact_sheet
- [13] You Tube Edu, http://www.youtube.com/channels?s=ytedu_mv