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Organisational Use of Web 2.0 Technologies: An Australian Perspective

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ABSTRACT

This paper is a discussion of an exploratory research on how organisations use Web 2.0 technologies to improve capabilities for achieving a competitive advantage. Web 2.0 technologies are commonly referred to as social media in organisations. The research in this paper was accomplished via case studies with Australian organisations from different industry sectors to establish the use of Web 2.0 technologies in a context different from personal social networks. Major findings indicate that Australian organisations have realised the opportunities of Web 2.0 and are increasingly adopting this new media, although at this stage adoption is ad hoc. The most popular technologies in organisations include blogs, youtube, myspace and flickr, which are successfully combined with other types of Web 2.0 technologies to support the nature of work in specific industries. This paper also highlights that Web 2.0 technologies can add to organisational dynamic capabilities by engaging customers to promote products and extend cost effectively market products and services and lifting their brand. However, it identified an undesirable outcome that not all comments from customers are positive. Thus with Web 2.0 there is an urgent need for real time analysis of the large amount of data in terms of customer responses to cull out negative comments and sustain the organisation's good reputation and competitive advantage.

Keywords

Web 2.0 technologies, Social media, Web 2.0 in organisations, dynamic capability, competitive advantage with Web 2.0

INTRODUCTION

Following the exponential growth of Web 1.0 (World Wide Web) applications for business, a plethora of Web 2.0 technologies (blogs, wikis, youtube, my space, flickr, twitter etc.) have evolved over the last few years and are being extensively used by individuals (Treese, 2006), government agencies (Osimi, 2008) and by organisations across a multitude of industry sectors such as health, education, retail, and transport (Boulos and Wheelert, 2007; McAfee, 2006). Constanides and Fountain (2008) note that Web 2.0 applications are simple and unfussy, with easy to use interfaces and features.

Business organisations around the world are adopting Web 2.0 (Social) technologies with spending on social media in the United States alone forecasted to grow from \$716 million in 2009 to \$3.1 billion in 2014 (Forrester report, 2009). Business applications of Web 2.0 technologies not only facilitate novel ways of interacting with customers and hold the promise of new business opportunities (Boulos and Wheelart, 2007), but enable team work, a greater interaction with stakeholders (Constanides and Fountain, 2008) and strengthens the impact employees can have on the organization (Jue et al, 2010). For example, Cisco uses Web 2.0 technologies to collaborate and connect with customers, partners, communities and employees. Lee et al (2006) observe that complex knowledge management systems in organisations are now being replaced by 'blogs' and 'wikis' to promote knowledge transfer and sharing. It has also been suggested that social technologies provide

organisations with low-cost, low-risk marketing channels especially useful during an economic downturn (Forrester Marketing Forum, 2009). When applied in the marketing context, they also have the potential to drill down to the individual customer's level (Constanides and Fountain, 2008).

Despite the increasing mention that Web 2.0 technologies have received in the popular press and industry reports, empirical research on their use in organizations is still at a very nascent stage. In particular, the role played by the deployment of Web 2.0 technologies in enhancing organisations' capabilities to dynamically alter, reconfigure and build their resource and knowledge base as yet remains unexplored.

This paper is a first attempt to establish applications of Web 2.0 technologies (social media) in Australian organisations. The next section of the paper includes a brief review of literature on Web 2.0 technologies summarising their applications to organisations, benefits and how they add to the dynamic capabilities of organisations. After briefly describing the theory of dynamic capabilities and the research methodology, the findings as they apply to Australian organisations are discussed.

LITERATURE REVIEW

Web 2.0 is the phase of the Internet that enables anyone to create information online (Jue et al, 2010). Web 2.0 technologies are also referred to as social media represented in various forms and functions including blogs, wikis and social networking sites. Social computing, social technology, Web 2.0 and social media are used interchangeably to describe this new step in the evolution process of the Internet, which is also a new medium for developing dynamic capabilities and competitive advantages (Constanides and Fountain 2008). Although some may refer to Web 2.0 as another technology fad, it is increasingly becoming clear that it is here to stay and its growth is exponential (Powell, 2009). Characteristics of Web 2.0 that have enabled its wide adoption according to Chesbrough (2006) include collective intelligence of users, new ways of presenting data (mashed up), reliant on user-generated content, easy to program, elimination of software upgrade cycles, digital democracy, social networks, collaboration and rapid development of new business models. Other features of Web 2.0 are its dynamic content, rich user experience, metadata, scalability, open source and freedom (Turban et al, 2010). They also support a rich, interactive, user-friendly interface and increased loading speed and interactivity. Schonfeld (2006) suggests that a major characteristic of Web 2.0 is the global spreading of innovative web sites.

The increased adoption of social media by business organisations according to Jue et al, (2010) are due to the nature of business environment, changing workforce demographics and rapid advancements in software technology. Web 2.0 enables new ways of marketing, communication, gathering customer opinions and experiences about products, services and firms, and also allows personalised one-to-one marketing (Li and Bernoff, 2008). In view of the recent exponential growth of Web 2.0 technologies, businesses are looking to understand how Web 2.0 applications and processes affect business performances (Burkhardt, 2009). Technologies are crucial to businesses, more so in the current economic climate as organisations strive to maximise the strategic potential of IT functions (Reuters, 2009). According to Bean and Hott (2005) business applications of Web 2.0 include project management, to-do lists, customer care management, technical help desks and coordination of call centres.

Other applications of Web 2.0 in organizations range from marketing to customer service with online communities, advertising and improving customer service. According to Reinhold (2006), Duffy and Burns (2006), Fichter (2005) and Guy (2006) businesses *create* communities (work, employees, entrepreneur, friends, research, developer, and other like minded groups) on Web 2.0 to promote products, improve customer services, win the trust of community members to support the organisation, and to seek opinions from customers. Some examples include the use of Facebook by the HR department at T-Mobile to introduce new recruits to the employee community and allow them to network with other employees (Twentyman, 2008). On the other hand, Hewlette Packard uses communities to lift its brand by monitoring customer opinions (Gow, 2007). A common Web 2.0 application in business is that of advertising and marketing where organisations are capitalising on MySpace and Facebook to advertise products directly to its target potential customers and their friends replacing some of the traditional marketing techniques (Li and Bernoff, 2008; Hoegg et al, 2008). Organisations using the 'word of mouth' marketing principles via Web 2.0 range from technology and telecommunications companies to department stores, airlines and even small businesses (Browne, 2010). Improving customer service by seeking customer opinions (Zumbra, Fu and Li, 2009) as well as winning unhappy customers from competitors by monitoring their responses and product views on social media (Browne, 2010) is a new trend in business with social media. The Internet being the backbone of social media enables interaction with customers and business partners in any region of the world at any time of the day. Thus reduced barriers of time and geography in the new Web 2.0 environment enables businesses to communicate with and respond to clients in any region all hours of the day.

Business benefits of Web 2.0 technologies according to Cunningham and Wilkins (2009) include cost savings, easy to implement and maintain, reduced barriers of time and geography, collaboration and knowledge sharing. According to Jue et al (2010), social media is cost effective, helps global organisations to more effectively meet a global audience's training needs as well as engages employees in sharing knowledge and expertise.

Although the opportunities of Web 2.0 in organisations have been widely emphasised it entails a number of challenges. Some of these include intellectual integrity and regulation (Mainguy, 2006), vandalism and hacking (Raitman et al, 2005), security (Cunningham & Wilkins, 2009), privacy and reputation (Tynes, 2007), installation and change management (Spiteri, 2007), and copyright (Schroer & Hartel, 2007). However, since challenges are not the topic of this paper, these issues have not been elaborated upon.

From the above literature discussion it is apparent that for organisations Web 2.0 is a powerful networking tool, helps find new customers, builds deeper relationships with partners and other entrepreneurs, a cost effective marketing and communication tool, promotes information and knowledge sharing, and maximises collective intelligence. Although it is still early to evaluate the business value of Web 2.0 technologies in organisations, the business potential discussed above indicate the development of organisational resources and capabilities for improved business and competition. Despite the increasing emphasis of business opportunities from Web 2.0 technologies empirical research on organisational impact of these technologies is sparse. In particular, the role played by the deployment of Web 2.0 technologies in enhancing organisations' capabilities to dynamically alter, reconfigure and build their resource and knowledge base as yet remains unexplored. This leads to the following two research questions:

1. How does the deployment of Web 2.0 technologies in organisations influence the creation and development of dynamic capabilities?
2. How do the dynamic capabilities arising out of the implementation of Web 2.0 technologies help organisations build competitive advantages?

DYNAMIC CAPABILITIES AND WEB 2.0 TECHNOLOGIES

Dynamic capabilities contribute to the competitive advantage of organisations by helping them to reconfigure their strategic resources and to develop certain unique capabilities faster (Teece et al., 1997). The term dynamic refers to the capacity to renew competencies so as to achieve congruence with the changing business environment. Innovative responses are required when time to market and timing are critical, the rate of technical change is rapid, and in times when the nature of competition and markets is difficult to determine (Teece et al, 1997). To develop firm specific capabilities renewed competencies are tied to the firm's business processes, market positions and expansion paths. As discussed above, Web 2.0 applications in organizations alter factors of production, resources, organizational routines, core competencies, and products.

Due to the nature of the current business environment which has global operations, is faced with changing workforce demographics and rapid advancements in software technology, dynamic capabilities are particularly crucial (Teece et al., 1997). In response to the challenges of changing markets, organisations need to continuously create the capabilities of "acquiring, developing and deploying" relevant resources so that these capabilities may provide "distinctive sources of advantage" (Montealegre, 2002). Eisenhardt and Martin (2000) argue that dynamic capabilities' "value for competitive advantage lies in their ability to alter the resource base: create, integrate, recombine, and release resources." As noted above, our research discussed in this paper draws on the increasing expectations that the deployment of Web 2.0 technologies will help organisations reconfigure and build their resources in ways that will provide them with sustained competitive advantages. Although Web 2.0 technologies are popularly recognised as social technologies serving social functions, our discussion above highlights their strategic potential in business organisations, and it is these aspects that form the core of our study.

RESEARCH METHODOLOGY

The initial phase of the project was a comprehensive literature review of the increasing prominence of Web 2.0 (social) technologies and their deployment in business organisations. In addition to the reports produced by reputed market research firms, the literature review covered leading information systems (IS) and business & management journal publications. The literature review phase helped develop a more comprehensive theoretical understanding of the processes linking social technologies, dynamic capabilities and competitive advantage of firms. Drawing on these gaps, we adopted a qualitative case study approach to empirically address the research questions highlighted earlier. As Yin (2004) notes, a qualitative case study approach is most justified when research questions focus on novel phenomenon and address 'how' issues. We conducted our

fieldwork within medium and large Australian organisations, operating in Melbourne, which are using Web 2.0 technologies and agreed to participate in this project. Organisations investigated were identified from document and web analysis, and interviews were organised via phone calls. Document analysis and face-to-face interviews with informants cutting across different levels of the organisational hierarchy were conducted with six organisations. A semi-structured interview tool was used to collect data on organisational background, Web 2.0 technologies implemented by these organisations, aims of Web 2.0 technologies, implementation issues, outcomes such as enhanced resources and capabilities as well as other outcomes. All interviews were recorded and later transcribed and written up. From the six case studies related data was integrated and key themes were then identified for the establishment of changed resources, and conclusions were drawn in relation to dynamic capabilities and competitive advantage of the organizations investigated (Kvale 1996; Mile and Huberman 1994).

CASE STUDIES

The six case studies are briefly described in Table One below. Due to privacy of information we have referred to the organisations as Cases A to F.

Case	Country of Ownership	Type of Organisation	Industry	No of Employees	Competitive Threat
A	USA	Multi-national	Automotive	6,000	Other automotive organisations
B	Australia	Subsidiary	Insurance	540	Other finance & insurance cost
C	Australia	National	Education	4,000	Other education institutes
D	Australia	Multi-national	Education	6,000	Other education institutes
E	USA	Multi-national	IT	14,000	Other IT providers
F	Australia	Subsidiary	Travel	1,300	Other travel content providers

Table 1 Organisational Details

From the data presented in Table One it is clear that in Australia organisations from all industry sectors (education, finance, automotive, travel and IT), both large and small are resorting to social media (Web 2.0 technologies).

FINDINGS

When asked about the reasons for adopting Web 2.0 the respondents from all six cases indicated that it was mostly for engagement and innovation, increasing brand awareness, reducing costs of advertising, telling people why they exist and what they can do for their business partners and customers, and for finding out what customers wanted. These organisations also indicated that different types of Web 2.0 technologies were implemented in the organisation including facebook, twitter, youtube, flickr, RSS and others. However, it is worth noting that facebook, blogs, flickr and youtube were common technologies implemented across all organisations. Other technologies varied depending on the nature of business for example the education institutes used LinkedIn for professional networks and the travel organisation ‘mashed up’ facebook with google maps for greater support to its customers. The use of social media in all organisations was fairly new, adopted in an ad hoc fashion in the last 12 to 18 months. The implementation in all the organisations was seen as a new communication channel with an internal component supporting employee networks and team work, as well as an external component for marketing and providing a platform for customer opinions. It is also interesting to note that in some organisations implementation of Web 2.0 technologies were concentrated in small sections of the organisation such as marketing departments and not available to the whole organisation, whereas in others it was centrally based giving access to employees, clients and partners. It is also worth noting that in some organisations Web 2.0 projects were part of IT departments, in others it was with marketing and in Case B it was managed by a small team. In case E one person was appointed in charge of Web 2.0 project who was a little lost and was looking forward to some expert advice and guidance on how to succeed with it. Most of the respondents indicated that they closely observed what other organisations were doing with social media, followed their applications – ‘we do what our competitors do’. However, the general consensus was that implementation of Web 2.0 technologies in organisations was easy, it was getting the people on board that was the difficult issue.

Regarding the outcomes of Web 2.0 technologies the respondents indicated it was a major innovation in managing relationships with its stakeholders. It was unanimously agreed that Web 2.0 promotes interaction, collaboration and networking. They were confident that Web 2.0 helps promote honesty and transparency to customers and business partners, while the respondent from Case F emphasised that it exposed the organisation to a larger audience. Respondents from all cases were confident it helped achieve a competitive advantage with one of the responses being *'metrics prove we can blow our competition out of water – we have proven growth in the latest downturn in the market'*.

Other findings of this project indicate that for the implementation of social media in the organisations a strategy is required. Implementing the technology in an ad hoc basis takes a long time to win internal support. Another issue emphasised was that with Web 2.0 technologies it is essential to implement online real time analysis of customer responses for quick actions. Organisations have improved their capabilities by incorporating customer responses in product development, especially obvious with Case A the automotive firm. Web 2.0 was realized to be an easier platform for capturing customer complaints.

This research also highlighted that organisations are realising that with Web 2.0 customers want authenticity and speed, customers are becoming very technology savvy and asking for 'tweets' rather than emails. This was a common finding from both education institutes. However, a very important finding is to note that customer responses on social media are not always positive – *'some customers are at times a bit cheeky'*.

DISCUSSION

We have learnt from this research project that Australian organisations are well aware of the business opportunities that can be achieved from deploying Web 2.0 (social media) and are implementing these technologies to support their employee, customer and business partner networks. It is clear that although there are a plethora of Web 2.0 technologies early adopters prefer Facebook, Blogs, Flickr and Youtube. By investigating a range of organisations from different industry sectors, it was established that specific Web 2.0 technologies better serve particular industry sectors, such as LinkedIn for professional organizations and twitters for dealing with younger clients. It also highlights that with Web 2.0 technologies it is possible to better service customers by 'mashing up' the contents from one or more technologies. This research also indicates that to date Web 2.0 adoption is ad hoc with responsibilities lying with disparate groups and departments in different organisations. Findings clearly highlight the need for better planning and a Web 2.0 (social media) strategy. It represents the need for change management to get the people in the organisations to accept new ways of doing things with this new media. Relationship management with stakeholders was a major contribution of Web 2.0 induced from the integrated responses. Other findings indicate that Web 2.0 promotes transparency and improves capabilities for brand recognition, quality management and improved customer services by giving customers a space for their opinions. It also indicates that the changes Web 2.0 has to offer should not be underestimated. However, although this research highlights the avenues for improving capabilities with Web 2.0 and achieving a competitive advantage, the most important finding in this research is that customer responses are not always positive and require real time analysis of the large amount of data to save an organisation's reputation, image and competitive advantage.

This research is one of the few that investigated the application of Web 2.0 technologies in organisations. It confirms the views of Browne (2010), Twentyman (2008) and Bukhardt (2009) of improved customer service, the value of employee and stakeholder networks, and it also draws attention to the need for change management and a strategy for Web 2.0 implementation. This research clearly highlights that Australian organisations are realising that Web 2.0 presents businesses new opportunities for getting and staying in touch with their markets, learning about the needs and opinions of their customers as well as interacting with them in a direct and personalised way, confirming Constantinides and Fountain's (2008) opinion on Web 2.0. It also presents new challenges of quick analysis and management of the large amount of customer responses and opinions to avoid competitors capitalising on the negative comments.

The implications of this research on dynamic capabilities is that Web 2.0 can create, extend or modify its resource base (Helfat et al, 2007; Eisenhardt and Martin, 2000), with new ways of dealing with its customers and challenges of changing markets (Montealgre, 2002) to serve their technology savvy customers by offering a new platform for customer views and using blogs and 'tweets' on product information to lift their brands. Although this research highlights that Web 2.0 supports the processes and helps innovate products, further research is required to evaluate the value of Web 2.0 in organisations as these technologies gain maturity. The level of its impact on resources and ways and means of sustaining competitive advantage with this new media when competitors have access to customer responses both negative and positive are yet to be fully established. Although the challenges of change management and ad hoc implementation strategies were obvious, security issues in relation to the deployment of Web 2.0 technologies are yet to be ascertained. The findings and implications

discussed in this paper are based on an Australian study, which calls for an investigation of what the international organisations are achieving and doing with Web 2.0. The findings are limited

CONCLUSION

The deployment of Web 2.0 technologies are growing at an exponential rate and used not only by individuals for social networking but also by organisations to alter their resources and achieve competitive advantage. This is a new platform with promises of great opportunities and novel challenges. Akin to all new technologies successful deployment is dependent on strategic planning and its recognition with mainstream business to achieve enhanced resources and capabilities for business success. Implementation of Web 2.0 in organisations in an ad hoc fashion to keep up with competitors may end up with organisations incurring high costs and standalone islands of technology. Being an extension of the Internet (Web 1.0), the issues of security, cyber crime, vandalism and hacking, copyright and other problems associated with the Internet are concerns that require serious attention. In Australia Web 2.0 applications are still at an early stage with promises of remarkable opportunities for all industry sectors. However, these applications require efficient management of both technology and business to achieve success. This study is limited to early adopters of Web 2.0 and those organizations that agreed to participate in this research. It is anticipated that analysis of data from a wider sample of organisations will reveal a greater depth of capabilities for achieving a competitive advantage with Web 2.0 applications.

REFERENCES

1. Bean, L and Hott, D. D., (2005), 'Wiki: A speedy new tool to manage projects', *The Journal of Corporate Accounting & Finance*, 16, 5, 3 – 8.
2. Bernoff, J., & Li, C. (2008). "Harnessing the Power of the Oh-So-Social Web" *MIT Sloan Management Review*, Spring 2008.
3. Boulas, M. N. K. and Wheelert Steeve, (2007), 'The emerging Web 2.0 social software: an enabling suite of social technologies in health and health care education', *Health Information and Librarians Journal*, 24, 2 – 23.
4. Browne, K., (2010), 'Social Awareness', www.choice.com.au
5. Burkhardt P, (2009), *Social Software Trends in Business, Social Software and Web Technology Trends*, Information Science Reference. IGI Global, Viewed on 20 Aug 2009.
6. Business Wire (2008), "Central Desktop Launches Enterprise Solution Package- Pure SaaS Approach to Social Technology Addresses Today's Resource Constrained Economic Climate", viewed 7 May 2009: <<http://crm.sys-con.com/node/751745/print>>.
7. Chesbrough, H. W.(2006) *Open Business Models*, Boston, MA, Harvard Business School Press.
8. Constantinides, E. and Fountain, S. J., (2008), 'Web 2.0: Conceptual foundations and marketing issues', *Journal of Direct Data and Digital Marketing Practice*, 9, 3, 231 – 244.
9. Cunningham, P & Wilkins, J.,(2009), 'A Walk in the Cloud', *Information Management Journal*, 43, 1, 22 – 54.
10. Duffy, p. and Burns, A., (2006), 'The use of blogs, wikis, RSS in education: A conversation of possibilities', *Online Learning and Teaching Conference*, Brisbane.
11. Eisenhardt, K.M., and Martin, J.A. (2000) "Dynamic Capabilities: What are they?," *Strategic Management Journal* 21, 10/11, 1105-1121.
12. Fitcher, D., (2005), 'Intranets, wikis, bikis and collaborative working', *Online*, 29, 4, 47 – 50.
13. Forrester's marketing forum (2009), "Using the Down Economy to Catalyze Market Change", viewed 15 May 2009: <<http://www.forrester.com/events/eventdetail?eventID=2375>>
14. Forrester Research (2009), "Forrester Marketing Forum: Social Technologies Allow for More Accessible Innovation in Down Economy", viewed 7 May 2009: <<http://crm.sys-con.com/node/934450>>.
15. Gow, L. (2007), 'Tales from the Red Carpet get HP employees blogging', *Strategic Communication Management*, 11, 5, 8.
16. Guy, M. (2006), 'Wiki or Won't He? A Tale of Public Sector Wikis', *Ariadne*, 30, 49, October
17. Howe, J. (2008), *Crowdsourcing*. New York: Crown Business.

18. Helfat, C., Finklestein, S., Mitchell, W., Peteraf, M.A., Singh, H., Teece, D. and Winter, S. (2007) *Dynamic Capabilities: Understanding Strategic Change in Organizations*. Malden, MA: Blackwell.
19. Hoegg, R., Martignoni, R., Meckel, M. And Slabeva, S., (2008) University of St Gallen, Institute of Media and Communication <http://web2.0awards.org>
20. Hussey, J. and Hussey, R, (1997), *Business Research: A practical guide for graduate and post graduate students*, ManMillan Press, London.
21. Jue, A. L., Marr, J. A. and Kassotakis, M. E. (2010), *Social Media at Work*, Jossey-Bass, USA.
22. Karim, S. (2006) "Modularity in Organizational Structure: The Reconfiguration of Internally Developed and Acquired Business Units," *Strategic Management Journal* 27, 9, 799-823.
23. Kvale, S. (1996), *InterViews*. Thousand Oaks, CA Sage.
24. Lee, S. H. T. and Lee, H. H., (2006), 'Corporate Blogging Strategies of the Fortune 500 companies', *Management Decisions*, 44, 3, 316 – 3334.
25. Li, C. and Bernoff, J., (2008), *Groundswell*, Forrester.
26. Mainguy, G., (2006), 'Wikipedia and Science Publishing. Has the time come to end the liaisons dangers?', *Proceedings of 3rd NATO-UNESCO Advanced Research Workshop Science Education*, Balatonfured.
27. McAfee, A. P., (2006), 'Enterprise 2.0: The Dawn of Emergent Collaboration', *MIT Sloan Management Review*, 47, 3, 20 – 28.
28. Miles, M. B. and Huberman, A. M. (1994) *Qualitative Data Analysis* (2nd edition), Thousand Oaks, CA Sage.
29. Montealegre, R. (2002) "A Process Model of Capability Development: Lessons from the Electronic Commerce Strategy at Bolsa de Valores de Guayaquil," *Organization Science*, 13, 5, 514-531.
30. NetRating, N. (2006), User-generated content drives half of U.S. Top 10 fastest growing Web brands. Retrieved from the Web on 15 August 2009, www.nielsen-netratings.com/pr/PR_060810.pdf
31. Osimi, D., (2008) 'Web 2.0 in Government: Why and How?', JRC European Commission Scientific and Technical Report, ISSN 1018-5593.
32. Powell, J., (2009), *33 Million People in the Room*, Pearson Education New Jersey.
33. Raitman, R., Augur, N. and Zhou, W, (2005), 'Employing Wikis for Online Collaboration in the E-learning Environment: cCase Study', ICITA.
34. Redinnick, L., (2006) 'Web 2.0 and Business: A pointer to the intranets of the future?'. *Business Information Review*, SAGE Publications, 23, 4, 228-234.
35. Reuters (2009), "IT Seen as Playing Increasingly Critical Role for Companies During Economic Crisis", viewed 17 May 2009: <http://www.reuters.com/article/pressRelease/idUS149816+31-Mar-2009+PRN20090331>
36. Reinhold, S., (2006), 'WikiTrails: Augmenting wiki structure for collaborative, interdisciplinary learning', *International Symposium on Wikis*, Denmark, August.
37. Schonfeld, E., (2006) *Cryworld Attacks*, *Business 2.0*, August.
38. Spiteri, L. F. and Hartel, (2007), 'The structure and Form of Folksonomy Tags: The Road to Public Library Catalog', *Information technology and Libraries*, 26, 3, 13 – 25.
39. TechCrunch, (2009), "Fluid Uses Facebook Chat and Status Updates to Help Retailers Make Shopping Social", viewed 7 May 2009: <http://crm.sys-con.com/node/921805/>.
40. Teece, D.J., Pisano, G., and Shuen, A. (1997) "Dynamic Capabilities and Strategic Management," *Strategic Management Journal*, 18, 7, 509-533.
41. Treese, W., (2006) 'Web 2.0: Is it Really Different?', *Putting it Together*, June.
42. Yin, R.K. (2003) *Case Study Research Design and Methods* (3rd Edition), Sage Publications, Thousand Oaks, CA.
43. Turban, E., King, D., Liang, T., and Turban, D, (2010), *Electronic Commerce 2010: A Managerial Perspective*, Sixth Edition by, International Edition, Pearson, New Jersey (ISBN 0-13-513544-3).
44. Twentyman, J., (2008), 'Talking about my second generation', *Personnel Today*, 8, 9, 20 -23.

45. Tynes, B. M., (2007), 'Internet safety Gone Wild? Sacrificing the Educational and Psychological benefits of Online Social Environments', *Journal of Adolescent Research*, 22, 6, 575 – 590.
46. Zumbra, D., Fu, T. and Li, X., (2009), 'Assessing Public Opinions Through Web 2.0: A case Study on Walmart', ICIS proceedings.