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THE NEW MEDIA TECHNOLOGIES:
OVERVIEW AND RESEARCH FRAMEWORK

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ABSTRACT

The so-called new media technologies – often referred to as Web 2.0 – encompass a wide variety of web-related communication technologies, such as blogs, wikis, online social networking, virtual worlds and other social media forms. First, we present several views or perspectives that may be used to answer the question, "what is new media?" Then we examine and review five critical characteristics of the new media technologies – the Five C's: communication, collaboration, community, creativity, and convergence. Finally, we look at some of the uses and applications of new media in a selection of disciplines. This overview provides a much needed framework for scholars and educators who wish to learn from and contribute to this field of study.

INTRODUCTION

There has been much written in the trade and popular press –and quite a bit in scholarly publications – about specific new media technologies and their use in business (see, e.g., Manyika 2007) and in other arenas. The so-called new media technologies – often referred to as Web 2.0 – encompass a wide variety of web-related communication technologies, such as blogs, wikis, online social networking, virtual worlds and other social media forms.

In the past, much was made of the supposed "death" and decline of old media – say, newspapers, magazines, television, radio – after all, the news in newspapers is very old compared to news over the Internet. *Life* magazine died for that very reason; it was replaced by television. Some even compared old media to the telegraph, which was virtually replaced by telephone – and, of course, more recently by email. However, we usually see that, rather than replacing old media, new media serve to supplement old media, often working side by side to further the organization's goals. For example, the *New York Times* is available at newsstands as well as at their Internet site. News items at NYTimes.com are updated throughout the day and readers are encouraged to comment in real time. Columnists often have their own blogs on the site as well.

People in a specific area will often see only the partial effect of the new media revolution. Thus, for example, a newspaper reporter might note the importance of blogs; a television producer might be interested in the movement away from network television to online TV (e.g., watching a full episode on nbc.com); and so on. This brings to mind the Indian parable of the six blind men who went to "see" the elephant. Each blind man analyzed only that portion of the creature which he touched: The side was like a wall; the tail was like a rope; the trunk was like a snake, etc. Each of them was right and, of course, each was completely wrong.

The purpose of this paper is to review this so-called new media revolution as a "whole creature" and to attempt to provide a framework of sorts for the purposes of further examination of this phenomenon. We are all affected by the new media. It is not just a small effect here and a small effect there. The new media are dramatically influencing virtually every business, every

organization, and every discipline. It is hoped that the overview presented here can serve as a research framework for scholarship in this area.

This paper is organized as follows: First, we present several views or perspectives that may be used to answer the question, "What is New Media". Then we examine and review the characteristics of new media. Finally, we look at some of the uses and applications of new media in a selection of disciplines.

THE NEW MEDIA: SOME PERSPECTIVES

How does one explain what is meant by the term new media? Sometimes, it is as simple as enumerating the many specific examples that come to mind. Thus,

Q: What is new media?

A: Blogs, wikis, facebook, mashups, ...

Amazingly, enumeration turns out to be a pretty good way to explain to folks what is meant by the term new media. Listed in Table I are some examples of the new media and where to find them.

TABLE I: Some of the New Media

Blogs:	Blogger.com; technorati.com
Social networking:	Myspace.com; facebook.com; friendster.com
Social bookmarking:	del.icio.us
Wikis:	Wikipedia.com
P2P filesharing:	Bittorrent.com
Video clips, mashups:	YouTube.com; Google video
Virtual worlds:	SecondLife.com; webkinz.com

The term new media is used ubiquitously in many different ways. Lievrouw and Livingstone (2002) focus on the message (i.e., the communication and its practices), the technology (i.e., the medium), and the social context in which it is used. These three aspects of the new media show up repeatedly in the literature along with other more specific technologies and practices such as collaboration, digitization, telecommunication. Gitelman and Pingree (2003) take the temporal approach, using the term "media in transition" to describe a period of time during which a medium is emergent and thus a sort of contrast to and competitor for the old media. Manovich (2002) has defined new media as cultural objects "which use digital computer technology for distribution and exhibition."

Clearly, new media may be characterized using a variety of different approaches. In large part, the confusion – such as it is – among various definitions of the new media is due to an inherent confusion of the object of study – the message, the medium, the technology, the time period, the social context. In fact, today, the term media itself may sometimes refer to the technology – i.e., the medium of communication – but increasingly to the message itself. This appears to be the inverse of what Marshal McLuhan (1964) famously argued – that the medium (i.e., the technology) is more important to society than the content of the message – but perhaps that just shows how far we've come.

The use of the word "new" implies a time factor, so it may seem reasonable to define the term in a temporal context. However, this is a never-ending enterprise. There will always be something

"new" on the horizon. It would probably be a good thing to retire the word *new* in this context – a better choice would be *networked* media – but, as of now, it is meaningful.

We attempt here to outline some of the perspectives through which the new media technologies are often examined. We note, too, that there is quite a bit of overlap among these multiple views.

THE WEB 2.0 PERSPECTIVE

Some use the term Web 2.0 to refer to the technological underpinnings of much of what we call new media. This term probably came into usage around 2001, when O'Reilly Publications started to refer to "modern" Internet applications as "Web 2.0". The implication is that these are second generation web applications, a quantum leap ahead of the old applications (Vossen and Hagemann 2007); the idea being that, say, a personal web page is Web 1.0; a blog is Web 2.0. One interesting feature in this perspective is that of control. Web 1.0 applications were intended to force people to do certain things in certain ways at particular locations. With Web 2.0, the technology empowers users and this – far from stifling web-related activities – actually stimulates innovation and growth.

THE OLD VS. NEW PERSPECTIVE

Sometimes the best way to explain a phenomenon is to convey what it is not. One way to define the new media and their associated technologies is to contrast them to the old media. Old media – newspapers, magazines, radio, television – are communication delivery systems. These are

relatively independent, static, historical. Today, old media are almost always paired with new media – newspapers and magazines have online versions, as well as their own blogs, television networks produce a great deal of online content related to their programming, etc. Some of this evolution has been due to the concern that the new media is growing at the expense of the old media; and old media must evolve to survive. Voithofer (2005) specifically contrasts the new media with old media counterparts by describing the "newness" of the new media in terms of changes in production due to convergence of technology and media, storage (digitization and indexing), presentation (in a video display of sorts), and distribution over telecommunication networks.

Table II displays some examples of the old media vs. the new.

TABLE II – THE OLD VS. THE NEW

Books	→	Ebooks, wikis
Journalism	→	blogs
Music	→	pandora
Newspapers, Magazines	→	ezines
Radio	→	podcasts
Television	→	Full episodes on the web
Telephone	→	VOIP
Film	→	Amateur videos on the web
Photography	→	Flickr, Picasa
Art	→	Museums on the web

The past few years have brought wholesale transformations of established and existing media - e.g., photography, animation, television, film, newspaper. Computer-mediated communication and collaboration - e.g., email, chat room, IM, discussion forums, teleconferencing, avatar-based virtual worlds, VOIP, mobile telephony, blogs, wikis – have changed our organizations in

profound ways. Even consumption is different in the age of new media; we are seeing more active post-purchase behavior – in the form of, e.g., mashups, media sharing, and the modding of digital media.

THE HISTORICAL PERSPECTIVE

In comparing new media to the so-called "old" media – newspapers, magazines, radio, television – we may very well ask the question: Have the new media rendered the old media obsolete? Is this a "new world" – similar in scope to the broad societal transformations of the industrial revolution? The term "old media" would cause us to think so. However, what we have been seeing is more like a fusing of old and new. Newspapers have online blogs. Television channels have fan sites for their shows. In the historical perspective, we explore the various influences on today's new media, which could not exist without the convergence of media or, indeed, without the convergence of technology of the past several decades.

To do this, we might construct a timeline placing critical events in their historical context. The critical events or milestones included in such a timeline might be those relevant to technology, to media, or even to the national defense effort. Some such timelines may even begin in prehistory or in antiquity, and it is worth noting that examination of early media – say, cave paintings, writings, stories, songs – is quite informative as well as relevant. For example, most media in antiquity existed in the universe of the mind. Storytellers – musicians – had to be pretty smart; they memorized everything. There were some books (scrolls) but they were painstakingly handwritten and thus extremely expensive – and for most people, inaccessible. There was also

very little interest in the notion of ownership of media – unlike the intense discussions about intellectual property and copyright going on today. In fact, in ancient times, it was acceptable to write something and attribute it to a well known personality as 'author'.

There are several excellent timelines available, for example, See Drury (2003). To illustrate this approach, Table III contains a brief timeline of relevant technologies.

TABLE III – TIMELINE OF NEW MEDIA – RELATED TECHNOLOGIES

1834	First known "computer" Charles Babbage's Analytic Engine
1876	Alexander Graham Bell transmits speech -- OK, he yells: "Mr. Watson, come here, I want to see you."
1926	- 1940 Evolution of TV
1941	first television commercial
1946	ENIAC the first electronic computer
1964	SABRE airline reservation system - First automated electronic reservation and booking system using remote teletype machines.
1948	UNIVAC I – the first commercial computer
1965	Dartmouth Time Sharing System (DTSS) operational on and off campus.
1969	ARPANET, the original Internet, begins operation
1962	First computer game "Spacewar!"
1972	Intel microprocessor
1972	Ethernet LAN spec's formulated
1972	email on ARPANET @ used to mean 'at'
1973	Xerox Alto uses a "desktop" graphical user interface (GUI)
1979	Steve Jobs visits Xerox PARC
1980	TCP/IP
1984	Domain Name System (DNS) introduced
1988	Internet Relay Chat (IRC)
1991	WWW
1993	Mosaic first browser
1994	First banner ads on hotwired.com
1994	WebCrawler, first web search engine.
1995	AOL, Prodigy, and CompuServe come online.
1996	VOIP
1996	ICQ free instant messaging
1999	Napster Is Released
1999	Google Passes Beta Testing
2001	Ipod

2001	Wikipedia
2001	Napster Shuts Down
2002	Friendster
2002	Second Life (first public demonstration)
2003	Myspace
2003	Skype
2003	Technorati blog search Engine
2003	Linkedin
2003	Google acquires Blogger
2004	Flickr
2004	Facebook
2004	podcasting - internet audio programming
2005	YouTube

The historical perspective, illustrated with this sort of timeline, helps to clarify the antecedent technologies that had to be in place before the new media technologies of today could be developed. In addition, we can easily see how the pace of innovation has become increasingly rapid as we move forward. Furthermore, the trend towards increased interconnectivity, with its attendant globalization is evident as well.

THE FIVE C'S

Yet another perspective one might take in the study of the new media technologies is to examine the unique character of the new media technologies, especially the features that unite these seemingly disparate technologies under a single umbrella. The wide range of characteristics of these new media technologies can be summarized by the 5 C's: communication, collaboration, community, creativity, and convergence.

COMMUNICATION

By and large, new media technologies are concerned with communication in one form or another. After all, what are media if not communication modalities? Blogs may be viewed as an alternative or a complement to publishing, but they may also be an alternative to personal webpages. Furthermore, bloggers do not only engage in one-way posting. Many will cite and link to other blogger's posts; enough of this cross linking and the result is "conversational blogging" (Efimova and de Moor 2005). Communication supported by the new media may be categorized as unidirectional, collaborative, or networked. In our highly interconnected age, communication is extremely rapid, whether asynchronous or synchronous. The term *viral* – as in viral marketing or viral videos – is used to imply a rapid speed of transmission throughout networked society.

COLLABORATION

Many, if not all new media technologies enable collaboration over the Internet. The primary and definitive example of this sort of medium is the wiki. Much Internet collaboration of the past (and present) has been done using email. When we use email for collaboration on a document, we tend to forward the collaborative document as an attachment repeatedly, at each iteration, to all members of the group. This is a tremendous waste of resources in terms of time, inbox capacity, bandwidth, hard drive space, etc. and also limits the size of the group. With this sort of redundancy, there is always the potential that different copies of the document will contain different sets of information. In addition, with all this forwarding of attachment, there is increased potential for viruses and other malware. That the size of the collaborative group is not

limited by wiki technology may be illustrated by what is probably the most well known example of a wiki – Wikipedia, the online encyclopedia. For more on the use of wikis, see Tapscott and Williams (2006) and Sunstein (2006).

Blogs in general have limited collaboration. However, a single blog may be shared among a group of individuals and sometimes a blog may be used for group work. Online special interest groups often share documents and, more recently, Google Docs enables groups of users to work on the same document. The social networking technologies like Facebook have a collaborative aspect and virtual communities like SecondLife are used for virtual conferencing. Skype facilitates conference calls and chats.

COMMUNITY

A key feature of many of the new media – community – is fostered in a variety of ways and in a number of diverse new media technologies, for example, social networking sites like myspace and facebook; virtual universes like SecondLife and Webkinz; social bookmarking technologies like that of del.icio.us. even older technologies like listservs, discussion boards, Yahoo (or Google) groups – or, even, Usenet – fostered a sense of community among like-minded folks who might be disconnected in terms of geography or time zone, but can meet synchronously or asynchronously by way of Internet connectivity. Even among the new media technologies that do not seem at first to incorporate this sense of community, many eventually do. YouTube and Craigslist, for example, both have social networking aspects for users who login. Many of the

web technologies we may not even associate with new media now have a social networking component (for example, visit eBay and HowStuffWorks).

This aspect of the new media technologies, to a great extent, is responsible for the sense of the world as a smaller place than it used to be. Our new media communities reach all over the globe, and are democratic and inclusive. In essence, the new media technologies foster a leveling of the playing field (Johnson, 2007). Technology has become the great equalizer.

CREATIVITY

A key feature of the new media is user-generated content. Users are no longer the passive receivers of the message. The couch potato is already an outdated image. Today's "audience" members create and edit videos, post to blogs, post product reviews, and contribute content in a host of ways.

What motivates this active innovation in the new media? In large part this is due to the digitization of media. Is digital media that different from non-digital (that is, analog) media? For one thing, digitization makes editing extremely easy. Therefore, it also promotes creativity, since we are not burdened by the limits of the medium we are working with. Remember making changes to a large document using a typewriter? The size of the page severely limited any changes we were willing to make. With digitization and the right software our editing capabilities are limited only by our capacity for thinking.

Today, consumers of digital media do not simply, read, listen, view, or play it. They also edit, mod, and create mashups. This sort of post-purchase behavior means that a product is no longer necessarily "finished" when it goes into production and distribution.

CONVERGENCE

In years to come, the mashup may be viewed as the metaphor of choice for today's new media phenomenon. Indeed, if anything can be said to be the driving force behind the new media, it is the notion of convergence. The past decades have witnessed a convergence of technology more fantastic than fiction. This is primarily due to widespread digitization and to the Internet, which itself can be seen as the convergence of digitization and telephony. Some of the results of this trend are: companies that produce printers are now in the camera business; long distance telephone calls use a broadband internet connection; photographs are transmitted via e-mail using a cellular telephone; several companies are competing for video-on-demand; computer manufacturers are in the music business; and many more. There are many different types of convergence in the new media phenomenon, including convergence of technology, convergence of media, convergence of consumption, and convergence of roles.

CONVERGENCE OF TECHNOLOGY: One of the most obvious recent trends is the convergence of computer technology and entertainment: for example, Tivo. The marketers use one name for both industries: infotainment. With the national move to digital TV, will TV sets become obsolete, to be replaced by computers? A special kind of mashup is the convergence of

software applications into a web application hybrid, like applying Google Maps to real estate data to map the available homes in a particular community.

One counter trend seems to be the divergence of technology. For example, with mobile technology we can do the same thing over different platforms. We want to be able to, say, get our email and edit our Facebook site at home, at work, on the train, in the coffeeshop, etc. It is interesting to note that this divergence of technology appears to a special case or, perhaps, a consequence of the convergence of technology.

CONVERGENCE OF MEDIA: The old media – newspapers, magazines, radio, television – were fairly distinct and separate. Now we are seeing convergence of media *due to* technology - e.g., a newspaper must have an online presence and probably a few blogs. On the other hand, most of the old media producers have "converged" into a few large corporations. All the more reason to enjoy the entrepreneurial, democratic, and inclusive nature of the new media.

CONVERGENCE OF CONSUMPTION: We see convergence of consumption in consumers using several media simultaneously, e.g., computer, Internet, music, newspapers, telephone, camera, etc., and in consumers who produce mashups using several different forms of media. (Hynes 2003). One interesting question that arises: Does technological convergence drive consumer convergence? Or, is technological convergence a market response to the impetus of consumers towards multimedia multitasking?

CONVERGENCE OF ROLES: With the new media technologies, we have seen a blurring of the line among users, developers, distributors, producers, and consumers. New media encourages user-generated content; supports entrepreneurs, provides distribution channels for aspiring artists, and creates communities of consumers for these user-generated goods.

APPLICATIONS OF THE NEW MEDIA TECHNOLOGIES

Strategically, within an organization, new media technology may be incorporated individually – as, say, a corporate blog or a CEO's blog (Wyld 2007) – or comprehensively as a separate corporate function whose objective is to facilitate online communication and collaboration (Dearstyne 2007, McAfee 2006).

Some of the ways that new media technologies are being used in business include: blogs and podcasts used for public relations purposes; viral videos to stimulate word-of-mouth (i.e., buzz marketing); online advertising; using wikis for collaboration; creating a collaborative, learning-organization type of corporate environment (Smith 2007); networking and collaboration both within the organization and externally with consumers / users (Hathi 2007); monitoring the blogosphere for customers both satisfied and dissatisfied (Gillin 2007); participating and learning from brand-related social networking media (Murray 2007); enhancing customer loyalty and relationship marketing.

There are many other industries that have been affected by the new media. The following is a selection of application areas affected by the new media technologies, and some examples of the uses and application of new media in these areas. This is just a small sample of applications. Because of space limitations, many applications such as real estate, religion, military, and finance are not discussed. Also, it is interesting that even NASA is using SecondLife as a means of collaboration among its personnel.

ADVERTISING: Advertising media that did not even exist a few short years ago are leading the industry. Internet advertising is the fastest growing advertising medium. ZenithOptimedia expects online advertising to account for 8.6% of global ad spending in 2008, 9.4% in 2009, and 11.5% in 2010 (Kaplan 2007a, 2007b). This means that online advertising will surge ahead of radio in 2008 and magazines in 2010. Advertisers are expected to spend about \$20 billion worldwide this year on search ads (Google, Yahoo, and Microsoft totally dominate this area). In the United States, this type of advertising accounts for about 40% of all online advertising (Pfaffner, 2008). The whole notion of "pay per click" is very new – it feels as if it has been around forever – but it has not. Advertisers are turning to this type of advertising since it is the most selective way of reaching a prospect. A consumer is doing a search on, say, arthritis remedies, and ads for arthritis products appear at the precise moment.

In this TiVo age, companies are trying new approaches to advertising, such as product placement, brief commercials placed in front of official, network-sponsored streaming video content (e.g., television shows). Mars, manufacturer of various sweets, is now on Facebook .

Facebook users can send actual gifts to friends; in the past, they could only send “virtual” gifts (Jay, 2008).

RELATIONSHIP MARKETING: Relationship marketing is about satisfying customers (and other stakeholders) with quality products while building a long-lasting, trusting relationship with them. It is being transformed by the capabilities of the Internet. Social networking has taken off as a popular way of connecting with like-minded individuals all over the globe. It enables organizations to increase brand/customer loyalty while at the same time getting feedback from customers and discovering what changes they want. Companies are now taking advantage of this trend. For example, American Express is experimenting with a beta version of a "travel community" for its membership.

NICHE MARKETING: Companies create products using micro segmentation for target markets that are too small to be profitable by traditional ("old media") marketing strategies. The goal is to use buzz marketing through the Internet. To get consumers to promote the product, perhaps on their blogs, social networking profiles, etc. (Friedman *et al.* 2007). A powerful advertisement on, say, YouTube could go viral and successfully support a small company in launching a new product or service.

PUBLIC RELATIONS: The field of public relations now has a new tool at its disposal. It cannot rely solely on press releases, but must consider the use of blogs, video releases on YouTube, and organizational web presence. Scott (2007, p. 21) feels that “online content in all of its forms is causing a convergence of marketing and PR that does not really exist offline.”

Good web content can enhance the reputation of a firm but also cause consumers to purchase products.

HUMAN RESOURCE MANAGEMENT: Resumes are no longer "static" pieces of paper. They are content folded into searchable databases. According to one professional recruiter, Maureen Crawford-Hentz, "Social networking technology is absolutely the best thing to happen to recruiting – ever" (Langfitt 2006). One site that Crawford-Hentz uses for job candidates is LinkedIn. LinkedIn is a network of millions of professionals from all over the world. Finding an individual with a unique talent becomes considerably less complicated when all it takes is searching a business networking website. The cost of surfing a website is also considerably less expensive than personally interviewing dozens of candidates. In fact, many business networking sites provide a setting in which a member indicates whether or not s/he is interested in being contacted about job opportunities. Monster enables people looking for work to post resumes and search for a job electronically; employers can search through huge numbers of posted resumes. Some people are now even putting their "resumes" (video version) on YouTube.

IBM is using Second Life, an online virtual world, for training and mentoring new employees (Frauenheim 2006). The firm feels that a virtual world is less intimidating than the real one and individuals are more open to taking risks using their own avatars than when in the real corporate environment. Second Life is being used to teach new employees all types of working skills including how to sell.

POLITICS/JOURNALISM: Farrell and Drezner (2008) discuss the interesting paradox that even though blogs have relatively low readership when compared to traditional media, they still have a huge influence in U.S. politics. The authors found that “only 7% of the general public is exposed to blogs; however, 83% of journalists use them. Since journalists treat blogs very seriously, they have a great impact on politics. In addition, Moveon.org claims to have more than 3.2 million members across the United States and has become a powerful tool for social change.

Jenkins (2006, 2007) describes how the new media have created a “kind of citizen journalism.” In his words: “citizen journalists seek to hold mainstream media more accountable for the information it prints, and mainstream media seek to hold bloggers more accountable for the information they circulate. In this way, they both keep each other [on] their toes.” He observes that smart newspapers examine the blogosphere to discover underserved groups in their markets. This is very similar to what marketers are doing in trying to find micro-niches in the marketplace. Citizen journalists with cameras in their phones have enhanced professional reporting by making vivid images available to everyone on the Internet.

MEDICINE: Ruiz et al. (2006) discuss a serious problem in medical education. The emergence of new fields such as genomics, complementary medicine, and palliative care and new approaches, pose a huge challenge for medical education. Medical school curricula is already overburdened teaching traditional areas; the field of medicine, however, requires lifelong learning. The solution is learning that is collaborative and allows an individualistic approach to learning, i.e., Web-based learning. The authors point out that the Internet has become the tool to

enhance knowledge and the performance of the medical profession. Indeed, there are a number of digital repositories supported by medical education organizations for this purpose (e.g., healcentral.org, ivimeds.org, merlot.org, aamc.org/meded/mededportal). Boulos et al. (2006) also discuss the merits of new media technologies for medical education.

Medical professionals use new media when they stay connected with their PDAs to each other and to the latest information and look things up in dbs, etc. There is also a revolution on the consumer side. Patients arrive at the doctor's office with a lot of information, much of it obtained on social networking sites set up for specific conditions (Goetz 2008).

Virtual environments like SecondLife are being used to help the autistic and those on the Asperger's spectrum develop social skills in the virtual environment that they can later apply to the "real" world (Saidi 2008).

SOCIALIZING/DATING: The social networking website has been defined as “an online location where a user can create a profile and build a personal network that connects him or her to other users” (Lenhart 2007). These sites are extremely important for teenagers. According to a recent survey of online teenagers conducted by Pew Internet & American Life Project, 55% of all of online young Americans between the ages of 12-17 make use of a social networking site. Also, older female teenagers are more likely to use these sites. They are used to “reinforce pre-existing friendships.” Young boys use these sites for flirting purposes as well as to make new friends (Lenhart 2007). There are approximately 1,000 Internet dating sites in the United States; the major ones are Match.com, eHarmony, and Yahoo! Personals. More than 17% of American

singles have tried online dating (Cullen and Masters 2008). The major Internet dating sites are now expanding internationally to countries such as China and India. The online dating industry is growing rapidly and revenues were \$649 million in 2006 (Cullen and Masters 2008).

MANAGEMENT: The concept of a learning organization was first discussed by Peter Senge (1990), in his highly- influential book *The Fifth Discipline: The Art and Practice of the Learning Organization*. In the corporate world, many firms are recognizing that the ability of an organization to learn is the key to survival and growth and “organizational learning” has become the mantra of many companies (Argyris and Schoen, 1996; Senge, 1990). A firm that desires to become a learning organization has to encourage employees to share knowledge, insights, and experiences and transform itself to reflect this new knowledge. By doing so, the organization does not stagnate and can transform and make over itself very rapidly, something that is necessary in the Internet Age where competition can come from anywhere in the world.

A firm that wishes to create a learning organization requires an infrastructure that encourages and allows the free flow of knowledge, ideas, and information; one that has open lines of communication so that everyone in an organization has access to this accumulated knowledge. Also, the organization has to be one where one employee will compensate for another’s weaknesses, as in a successful sports team. The new media with its reliance on social networks, wikis, and blogs can help an organization transform itself into a true learning organization. Wikis are a valuable tool for the business world since they provide “an opportunity for organizations to improve collaborative work and knowledge sharing” (Edmonds, 2006).

The learning organization is the 'why'; the new media technologies are the 'how.' Or, to put it another way, the new media technologies have the capacity to fulfill the promise of the learning organization and its principles.

EDUCATION: Peter Drucker in an interview noted that: “Thirty years from now the big university campuses will be relics. Universities won’t survive. It’s as large a change as when we first got the printed book” (Lenzner and Johnson, 1997). It is becoming apparent that most educators are no longer using "chalk and talk". Even such content management systems as "Blackboard" are relatively "old" media – but are evolving in the direction of new media. Thus, many educators are already employing such features as blogs, wikis, podcasts and streaming video in the course materials. Web-based learning will probably not replace the traditional face-to-face way of learning. However, it will become a tool to enhance the conventional approach to learning (Ruiz, Mintzer, and Leipzig, 2006). Since lifelong learning is becoming increasingly important in so many industries, it is much easier to ensure it using new media approaches.

ENTERTAINMENT: Consumers are starting to watch full-length television episodes online. The amount of spending on online video ads is very small but is expected to grow and reach \$4.3 billion in 2011. Jesdanun (2008) observes that “Marketers and Web sites alike are struggling to bring to the Internet ads that resemble television without turning off viewers the way TV ads often do.”

The following are activities that many of us perform, especially young people, that were not available in the past: surfing the Internet, downloading/listening music from the Internet;

listening to an iPod or other mobile device; reading and writing blogs; using social network sites; etc. There is no question that more time will be spent on these leisure activities in the future. What is even more interesting is the trend towards audience-provided entertainment. In the past, entertainment was provided by the media. Almost all of the audience were “couch potatoes.” Their “job” was to be passive consumers of entertainment. Today, the audience is created the entertainment: They create videos, blogs, web sites, music, and other kinds of entertainment for others. Christine Dolce created a MySpace Profile and has one million “friends.” She is trying to commercialize her online stardom and market products; a comedy video by a 30-year old from Cleveland has been seen by 30 million people (Jurgensen, 2006).

Media companies such as Viacom, parent of Nickelodeon and MTV, are getting involved in online games. They want to use them not only as a tie-in to their television programs, but also as another way to attract advertisers (Stelter, 2008). In fact, many young people will multitask and play an online game while watching the television it is based on. Yahoo Games, Nickelodeon, Electronic Arts, and Disney.com are the industry leaders in online games market. According to recent studies, approximately one-third of web users, will play one or more games a week on the Internet. This is a huge market.

CONCLUSION

Haagerup (2006), editor in chief of *Nordjyske Media* in Denmark shows how the key to survival in the Internet age is by adapting. He had to change the way of thinking at a newspaper that

dates back to 1767. By the time readers see the newspaper, much of the news is old. Everyone knows about the latest crisis and has seen photographs on the web and read the story. The role of a newspaper has changed thanks to the new media. A newspaper that is going to survive has to take advantage of the new media. Haagerup makes the point that Darwin did not say that the strongest survive – where are the dinosaurs today? – the species that are superior at adapting to change, those are the ones that will carry on.

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