# **Proceeding**

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# Technology utilization in higher education and in sport management teaching

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#### ABSTRACT

Carkanji V, Bozo D. Technology utilization in higher education and in sport management teaching. *J. Hum. Sport Exerc.* Vol. 7, No. Proc1, pp. S202-S207, 2012. The rapid changes in technology have impacted also the education institutions. High education institutions have slowly implemented the new technology in the process of learning and the curricula. Thus, sport management educators need to better understand technology's importance to their field and as part of their efforts to achieve promotion and tenure. However, more studies are needed to research the utilization of technology in sport management courses. This study presents an overview of technology utilization in high education, the relation between the technology and learning process, and the need of implementing the technology in sports management courses. **Key words**: FACILITATION OF LEARNING PROCESS, IMPLEMENTATION OF NEW TECHNOLOGY, SPORTS MANAGEMENT CURSES.

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#### INTRODUCTION

The development of technology, in the last two decades, has had its positive impact on the education process. Furthermore, technology has been easily integrated to universities and it has been seen as a potential external force to enhance teaching and learning (DePauw, 1998; Massy & Zemsky, 1994). The use of technology in education will significantly affect teaching and learning process. DePauw (1998) noted the benefits of technology in data collection, data analysis, networking, and online and virtual learning. According to Massy and Zemsky (1994) technology will demand fundamental changes from education institutions in the respond to the new technology and this transformation will be a long process. Lieberman (1960) argued that transformation in education would affect "teachers' organization, professional ethics, teachers' education, the theory and practice of teacher compensation, and many interrelationships between teachers and students, parents, communities and governmental agencies" (p. 39). Even though that technology rapidly progressing in all the science fields, by the late 1990s the educational institutions have done little changes with slow rhythm to install computers, create computing classes, or implementing computer programs (Barron & Orwig, 1993; Jaber & Moore, 1993). However, the first years of the new millennium found higher education institutions utilizing technology in curriculum in greater amounts. Different reports indicated that access to computers, to CDROMs, and international networking has improved and increased satisfactory.

# **MATERIAL AND METHODS**

The authors conducted a literature review to summarize and synthesize the arguments and ideas about the utilization of technology in higher education. This review reports the possible advantages of technology in relation with teaching and learning. The main question discussed, regarding implementation of technology in learning process, has been: to what degree contribute the use of technology to increase the learning productivity? (Massy & Zemsky, 1994; Swayer, 1993).

We applied one exclusion criteria: The articles that are not about sports higher education.

# **RESULTS**

The literature review on utilization of the technology in universities has found issues such as: facilitation of academic learning, factors influencing faculty use of technology, barriers of technology implementation in curricula, methods of integrating technology into the curriculum, the technological learning environment, and the current status of technology-supported learning (Wilson, 2008).

# Facilitation of Academic Learning

The use of technology in the course has allowed teachers and students for a productive communication, teachers have posted assignments, lecture notes, projects, recent information and as a result students have increased their interest for the course. Spinelli (2001) argued that the professors demonstrate the material with an overhead computer presentation and the student could also practice the exercises concurrently on their computers. Furthermore, audio-video technology or conference calls have create the possibility for both, teachers and students, to logon from any location in the world and also bring into the classroom expert from the field. Deden and Carter (1996) noted that professors would be using more efficiently the lecture time and students through it, would be exposed to technology as it is applied in the real world. Technology allows faculty to accommodate individual differences in student goals, learning

style, and abilities, while providing improved convenience for both students and faculty on an "any time, any place basis (Massy & Zemsky, 1994).

On the other side, there are opposite voices that technology is costly to implement into the classroom. Young (2004) suggested that technology is more an administrative benefit than it facilitates learning process. Students, through the technology, have access to resources, easy communication with professors, and collaboration possibilities but these do not influence the enhancement of the student learning (Zisow, 2000; Bauer, Reese, & McAllister, 2003). Additionally, the researchers have discussed the technology in term of students 'grade performance. However, the connection between technology and learning has been seen under its usefulness in the learning process (Smith, Higgins, Wall, & Miller, 2006).

# Technology's Cost-Benefit

One of the concerns about the technology is that the benefits gains from it do not justify its high cost. For example, students have stated that technology has had little impact on the teaching of their professors (Young, 2004). Also, the students interviewed from Spinelli (2001) stated that in traditional classroom they were enabled to better understand the principles of statistics, because of the use of calculation while the students who were more computer literate enjoyed the aspect of using the statistical software to obtain answers. Furthermore, students face computer challenge skills and instead of concentrating to the lecture they may lose time to learn to utilize the software. According to Garrett (1997) students enhance their ability to be competitive in a "wired" world. Use of technology decreases the face-to-face interaction in the classroom. Spinelli (2001) studied two different groups of students who learned in traditional classroom and computer base classroom. The traditional learning students communicate and discuss to each other while computer based students lacked of communication. As soon as they entered the classroom, they concentrated on the computer and started working independently. Neal (1998) stated that the communication involved in addressing peers face-to-face in decision-making process is different than that done through technological means.

As far as concerned the sport management education, Cuneen (2004) noted that education faces students who "wish to be taught rather than inspired and wish to buy information and those single skills that will make them excel in the workplace at a fast rate" (p. 3). This statement match with Grasha and Yangarber-Hicks (2000) who stated that this generation of students is not suitable for technologically-based courses.

Based on articles reviewed above, the technology facilitation of learning "lies not in the decision to use technology but in the methods by which technology has been implemented" (Wilson, 2008, p. 27). Thus, technology can facilitate learning.

# Factors Influencing Faculty Use of Technology

The implement of technology, under the teachers' point of view, must have pedagogical benefit. Wilson (2008) has considered (see Table 1) thirteen factors which influence faculty's use of technology based on the research literature.

Table 1. Factors influencing faculties' use of technology.

Bauer, Reese, & McAllister, 2003; Bitner & Bitner, 2002; Bowman & Cuyler, 1999; Falvo, 2003; Comman & Cuyler, 1999; Com	Factor Affecting Technology Use	Research Identifying that Factor
Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997; Schrum, Skeele, & Grant, 2002; Szul & Buttermore, 2002; Willis, Tucker & Gunn, 2003  Time  Cardenas, 1998; DenBeste, 2003; Hall & Elliot, 2003; Jaber & Moore, 1999; Koehler et al., 2004; Schrum, Skeele, & Grant, 2002  Motivation/interest level/apathy  Bitner & Bitner, 2002, Jaber & Moore, 1999; Koehler et al., 2004  Fear  Bitner & Bitner, 2002; Marvin et al., 1999; Rickard, 1999  Professional organization  Bauer, Reese, & McAllister, 2003; MENC, 1999; NCATE, 2002; Rudolph, Richmond, Mash, & Williams, 1996; Schrum, Skeele, & Grant, 2002  Needs of students  Grasha & Yangarber-Hicks, 2000; Young, 2004  Institutional financial support  Hall & Elliott, 2003; Howland & Wedman, 2004; Jaber & Moore, 1999; Niess, 2001; Schell, 2004; Schrum, Skeele, & Grant, 2002  Institutional culture regarding  Hall & Elliott, 2003; Koehler et al., 2004; Massy & Zemsky, 1995; Sandholtz, 2001; Schrum, Skeele, & Grant, 2002  Accessibility  Bitner & Bitner, 2002; Jaber & Moore, 1999; Sandholtz, 2001; Schrum, Skeele, & Grant, 2002  Accessibility  Bitner & Bitner, 2002; Jaber & Moore, 1999; Sandholtz, 2001; Schrum, Skeele, & Grant, 2002  Accessibility  Bitner & Bitner, 2002; Jaber & Moore, 1999; Sandholtz, 2001; Schrum, Skeele, & Grant, 2002  Accessibility  Bitner & Bitner, 2002; Hall & Elliott, 2003; Bitner & Bitner, 2002; Hall & Elliott, 2003; Schnoltz, Ringstaff, & Dwyer, 1997; Schrum, Skeele, & Grant, 2002; Willis, Tucker & Gunn, 2003  Institutional reward structures  Bitner & Bitner, 2002; Hall & Elliott, 2003; Sanholtz, Ringstaff, & Dwyer, 1997; Schrum, Skeele, & Grant, 2002; Willis, Tucker & Gunn, 2003		2002; Bowman & Cuyjet, 1999; Falvo, 2003; Grasha & Yangarber-Hicks, 2000; Hall & Elliott, 2003; Jeffries, Woolf, & Linde, 2003; Koehler, Mishra, Hershey, & Peruski, 2004; Neal, 1998;
2003; Jaber & Moore, 1999; Koehler et al., 2004; Schrum, Skeele, & Grant, 2002  Motivation/interest level/apathy  Bitner & Bitner, 2002, Jaber & Moore, 1999; Koehler et al., 2004  Fear  Bitner & Bitner, 2002; Marvinet al., 1999; Rickard, 1999  Professional organization  Bauer, Reese, & McAllister, 2003; MENC, 1999; NCATE, 2002; Rudolph, Richmond, Mash, & Williams, 1996; Schrum, Skeele, & Grant, 2002  Needs of students  Grasha & Yangarber-Hicks, 2000; Young, 2004  Institutional financial support  Hall & Elliott, 2003; Howland & Wedman, 2004; Jaber & Moore, 1999; Niess, 2001; Schell, 2004; Schrum, Skeele, & Grant, 2002  Institutional culture regarding  Hall & Elliott, 2003; Koehler et al., 2004; Massy & Zemsky, 1995; Sandholtz, 2001; Schrum, Skeele, & Grant, 2002  Accessibility  Bitner & Bitner, 2002; Jaber & Moore, 1999; Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997  Technical support  Adria & Rose, 2004; Apple Computer, 2003; Bitner & Bitner, 2002; Hall & Elliott, 2003; Howland & Wedman, 2004; Jaber & Moore, 1999; Koehler et al., 2004; Parker, 1997; Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997; Schrum, Skeele, & Grant, 2002; Willis, Tucker & Gunn, 2003  Institutional reward structures  Bitner & Bitner, 2002; Hall & Elliott, 2003;	Training	Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997; Schrum, Skeele, & Grant, 2002; Szul &
Bitner & Bitner, 2002; Marvin et al., 1999; Rickard, 1999	Time	2003; Jaber & Moore, 1999; Koehler et al., 2004;
Rickard, 1999  Professional organization guidelines  Bauer, Reese, & McAllister, 2003; MENC, 1999; NCATE, 2002; Rudolph, Richmond, Mash, & Williams, 1996; Schrum, Skeele, & Grant, 2002  Needs of students  Grasha & Yangarber-Hicks, 2000; Young, 2004  Institutional financial support  Hall & Elliott, 2003; Howland & Wedman, 2004; Jaber & Moore, 1999; Niess, 2001; Schell, 2004; Schrum, Skeele, & Grant, 2002  Institutional culture regarding technology  Hall & Elliott, 2003; Koehler et al., 2004; Massy & Grant, 2002  Accessibility  Bitner & Bitner, 2002; Jaber & Moore, 1999; Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997  Technical support  Adria & Rose, 2004; Apple Computer, 2003; Bitner & Bitner, 2002; Hall & Elliott, 2003; Howland & Wedman, 2004; Jaber & Moore, 1999; Koehler et al., 2004; Parker, 1997; Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997; Schrum, Skeele, & Grant, 2002; Willis, Tucker & Gunn, 2003  Institutional reward structures  Bitner, 8 Bitner, 2002; Hall & Elliott, 2003;	Motivation/interest level/apathy	
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Jaber & Moore, 1999; Niess, 2001; Schell, 2004; Schrum, Skeele, & Grant, 2002  Institutional culture regarding Hall & Elliott, 2003; Koehler et al., 2004; Massy & Zemsky, 1995; Sandholtz, 2001; Schrum, Skeele, & Grant, 2002  Accessibility Bitner & Bitner, 2002; Jaber & Moore, 1999; Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997  Technical support Adria & Rose, 2004; Apple Computer, 2003; Bitner & Bitner, 2002; Hall & Elliott, 2003; Howland & Wedman, 2004; Jaber & Moore, 1999; Koehler et al., 2004; Parker, 1997; Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997; Schrum, Skeele, & Grant, 2002; Willis, Tucker & Gunn, 2003  Institutional reward structures  Bitner & Bitner, 2002; Hall & Elliott, 2003;	Needs of students	Grasha & Yangarber-Hicks, 2000; Young, 2004
Technical support  Accessibility  Bitner & Bitner, 2002; Jaber & Moore, 1999; Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997  Technical support  Adria & Rose, 2004; Apple Computer, 2003; Bitner & Bitner, 2002; Hall & Elliott, 2003; Howland & Wedman, 2004; Jaber & Moore, 1999; Koehler et al., 2004; Parker, 1997; Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997; Schrum, Skeele, & Grant, 2002; Willis, Tucker & Gunn, 2003  Institutional reward structures  Bitner & Bitner, 2002; Hall & Elliott, 2003;	Institutional financial support	Jaber & Moore, 1999; Niess, 2001; Schell, 2004;
Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997  Technical support  Adria & Rose, 2004; Apple Computer, 2003; Bitner & Bitner, 2002; Hall & Elliott, 2003; Howland & Wedman, 2004; Jaber & Moore, 1999; Koehler et al., 2004; Parker, 1997; Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997; Schrum, Skeele, & Grant, 2002; Willis, Tucker & Gunn, 2003  Institutional reward structures  Bitner & Bitner, 2002; Hall & Elliott, 2003;		Zemsky, 1995; Sandholtz, 2001; Schrum, Skeele, &
& Bitner, 2002; Hall & Elliott, 2003; Howland & Wedman, 2004; Jaber & Moore, 1999; Koehler et al., 2004; Parker, 1997; Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997; Schrum, Skeele, & Grant, 2002; Willis, Tucker & Gunn, 2003  Institutional reward structures  Bitner & Bitner, 2002; Hall & Elliott, 2003;	Accessibility	Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer,
	Technical support	& Bitner, 2002; Hall & Elliott, 2003; Howland & Wedman, 2004; Jaber & Moore, 1999; Koehler et al., 2004; Parker, 1997; Sandholtz, 2001; Sanholtz, Ringstaff, & Dwyer, 1997; Schrum, Skeele, &
	Institutional reward structures	# 1
Institutional vision Barnett, 2003	Institutional vision	Barnett, 2003

Recently, teachers have replaced the traditional teaching methods with computer technologies. Traditional methods of instruction have been somewhat replaced by more convenient and user-friendly computer technologies (Wilson, 2008). Teachers need to be train how to utilize the technology in the learning process and how to benefit by integrating it even in curricula. The fact is that integration of technology in curricula and classroom is time consuming and teachers see it as one of the biggest challenges (Sandholtz, 2001). When they are asked to change their teaching methods some teachers are skeptic about it. Thus, to overcome these difficulties teacher need motivation and commitment to implement technology in the learning process.

# DISCUSSION AND CONCLUSION

The studies in the sport management literature have found that the literature needs increased study of technology, its impact in their discipline, and especially, faculty experiences with technology (Dawson, 2006; Wilson, 2008). Thus, sport management educators need to better understand technology's importance to their field and as part of their efforts to achieve promotion and tenure (O'Meara, 2005). Students have shown interest in use of technology in classroom and they can benefit in two areas: course management software and online delivery content (Wilson, 2008). Turner (2004) stated that use of course management software increases efficiency in the administration of courses and enhance delivery of information to students. Bennett (2002) has compared the students of the traditional course with students on the online course and the results have revealed that online students were more satisfied with their course.

On the other side, students have been concerned about the online quizzes and social interaction with peers (Bennett, 2002). Different authors have been concerned with the neglect of technology utilization in management course. Teachers have ignored the technology in sport management and its importance for preparing successful sport managers (Bennett, 2002). However, few researchers have studied the technology utilization in sport management courses and as a result; the need for deeper research in curricula in sports management and the ability of sports management students are much needed.

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