The potential for social media use in K-12 physical and health education

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Abstract

This paper did a review of the literature on social interaction in education, social media and social interaction, and the use of social media in personal/community health and physical education programs in order to set a research agenda for the use of social media in K-12 physical and health education. The findings were that social interaction can positively impact education and that social media can enhance the social interaction in the educational setting. It also showed how current health/wellness programs outside of the K-12 system are already using social media. There is a need for research on social media in K-12 settings in order to find if it can have an impact in creating healthy and informed decision makers in K-12 physical and health education.

1. Introduction

The ubiquity of social media is a phenomenon that does not seem to be going away and in fact is still on the rise with usage up 800% from 2005 (Olenski, 2013). 72% of adults use social media sites with about 1.1 billion people using the Facebook social media site alone; that is about one out of every seven people on this planet, and that is only one social media site (Olenski, 2013). Along with the rise of social media in the world, emerging research is following. With social media now impacting so many areas, education (both formal and informal) is also being impacted and thus research is beginning to emerge in the area of education.

Popular media has, at times, characterized the youth’s use of social media as being a detriment to education and specifically literacy and social values, while others have been proponents of social media as a means to benefit the educational experience and learning (Greenhow, 2011). The use of new media and technology has been portrayed in a negative manner and adults and media have identified social media as a reason for declining morality for today’s youth (Thurlow, 2006). Whether there is a negative or positive effect from social media, there may be a disconnect between the tools used by adults and students in the social media arena (Roblyer, McDaniel, Webb, Herman, & Witty, 2010). Regardless of any apprehensions or characterizations, social media has become an important factor in our world (for social, business, economy, etc.), and it is also becoming a factor in all educational settings.

The effects of social media in education has been researched in numerous content areas but, to date, there is very little research in the area of social media and K-12 physical and health education.

Social interaction is an important aspect of education and has been shown to enhance the education experience and achievement for learners (see research that follows) and social media is a popular avenue to increase or foster social interaction (see research that follows). Physical and health education have an inherent social aspect as a K-12 content area and social interaction is a part of both the K-12 physical education national standards (see Appendix A) and the K-12 health education national standards (see Appendix B). With such strong importance placed on social interaction in K-12 physical and health education, it is imperative that we begin to collect empirical data on the influence of social media in K-12 physical and health education.

This paper will look at the research on social media in the general area of education and attempt to set the stage for a research agenda in social media in K-12 physical and health education. More specifically, this paper will look at three areas of social media and education: 1 – The relationship between social interaction and the educational experience; 2 – The relationship between social media and social interaction; 3 – The relationship between social media and community and personal physical and health education outside of the K-12 setting. These three main categories, along with the minimal research findings related to social media and K-12 physical and health education were included in the results.

1.1. Operational definition

For the purposes of this paper, the following definition for the term social media will be used: Social media is a bottom-up model
where consumers are active participants in the information that is gained and shared (Hanson et al., 2011). The web 1.0 technology was a top-down way of disseminating information with the user being an inactive participant. This definition is what will represent the term social media and/or web 2.0 in this paper.

2. Method

A general search of literature was done by using the keywords (listed above) in three academic search engines; Google Scholar, PubMed, and SPORT Discus. The use of the keywords were used in a variety of phrases to find all literature surrounding this topic.

While collecting the literature three major themes emerged and thus all related literature were categorized into one of the following: (a) social interaction in education, (b) social interaction through social media, and (c) social media in community and personal physical and health education. As there was not very much literature on social media in K-12 physical and health education, it did not emerge as a theme however it will be included in the paper and is considered as a category for the literature search. When an article covered more than one of the categories, it was placed it in all the categories that it fit in order to have complete information in all categories.

The literature in each category was reviewed and summarized to parse out the important findings that will give insight into and lead to further research in the area of K-12 physical and health education. To be included in this paper, the content must have had quantitative or qualitative data to support at least one of the four categories listed above.

3. Results

3.1. Social interaction in education

Typical educational systems are set up in a way that social interaction is part of education. Walk into any typical school building and social interaction surrounds everything that is happening. There is social interaction between the students, between the teachers and staff and also between the students and teachers/staff. Whether the inherent social interactions are used to enhance education or learning is a question that has been researched.

In looking at social interaction in education, Richardson and Swan (2003) found that increased social interaction can lead to increased perceived learning and satisfaction. Chaiprasurt and Esichaikul (2013) found that effective interaction positively impacts motivation and conversely, lack of communication and/or interaction can lead to poor performance in education settings. As we look at education in the modern world, Frimming, Polsgrove, and Bower (2011) state that we need to “…recognize that the modern day students’ way of learning about the world centers largely on social networking” (pg. 223).

Not surprisingly, the interactions between student and instructor are important factors in the effectiveness of a course and the learners also view social interactions as important in an educational experience (Volery & Lord, 2000). Boling, Hough, Krinsky, Saleem, and Stevens (2012) used interviews to find that a favorite aspect of an online course was social interaction and that learning can be strongly influenced by the social learning environment. Social exchanges were identified as a favorite aspect of online courses and learning can be strongly influenced by the social learning environment (Boling et al., 2012).

There are many complicated factors that affect an individual’s educational experience and his/her successes and failures, but research has shown that increased social presence and interaction will lead to an increase in perceived learning and satisfaction (Richardson & Swan, 2003). Social presence now, more than ever before, can happen in a variety of ways. Face-to-face interaction is an obvious avenue for social presence and interaction, however the use of the popular social media website, Facebook, has been shown to maintain social ties for college undergraduate students and the Facebook users were shown to have higher levels of social capital (Greenhow, 2011).

Social media has become a popular way of interacting socially in our current world. It is estimated that 1 in 4 people in the world used social media in 2013, with those numbers estimated to continue increasing (eMarketer.com, 2013). It is obvious that social media has been another outlet for social interaction which, either directly or indirectly, will have an effect on education.

The research indicates that social media has the potential to increase social presence, which can lead to an increased educational experience and greater accomplishment.

3.2. Social media and social interaction

While it has been shown that social interaction enhances the educational experience, it is important to understand if social interaction includes social media and if the same benefits apply. In a study done by Roblyer et al. (2010), it was found that 60% of students using social media discussed education through that social media. They also found that 30% of those students discussed specific school work. The social interaction that once was done face-to-face or via the telephone is now shifting to include social media. Tools such as Yahoo groups, wikis and other online communities are being utilized by students and resulting in increased attitudes and motivations for the students (Olasina, 2012). The use of video social media such as video podcasts and video conferencing can be used to enhance the attitude, engagement and personalization of the learner (Andrews, Smyth, & Cadaline, 2010).

Higher education typically has been shown to be slow adopters of new technologies (Roblyer et al., 2010) and keeping current with technology can be a daunting task for educators. It has been shown that traditional media has declined in popularity and the use of web 2.0 is now being utilized to obtain important information and to communicate to other individuals (Hanson et al., 2011). Students are not simply using social media because of the technology, they are finding that the education from this medium provides tailored information and they can find examples and have interactions with people who have the same needs (Hanson et al., 2011). When information can be personalized it will become more important and powerful for them.

Students have demonstrated that social media is important in their lives and have emphasized that they use social media for educational reasons in collaborating and asking questions about specific school work (Greenhow & Robelia, 2009). Polsgrove and Frimming (2013) found that using a social media tool such as Facebook can link learners by allowing for anytime interaction through a social media format that is very familiar and accessible (Facebook). In an earlier study, Frimming et al. (2011) stated that empowerment to learners can come from an interactive environment that mirrors the way a student learns, which can encourage community educational groups. Good teaching includes applying the content knowledge in a way that is adaptable to the characteristics and the environment of the students (Shulman, 1987), and students are clearly using social media.

Effective interaction can positively impact learners’ motivation while lack of communications and interaction can affect motivation and ultimately lead to poor performance (Chaiprasurt & Esichaikul, 2013). Klein (2008) showed that the use of a social networking site did improve test scores, student achievement and writing and language fluency.
A sense of belonging and connectedness is an important factor in education and learners tend to do better when they feel a sense of belonging and connectedness. Social media can increase the sense of belonging and connectedness with a prolonged membership on social media (Greenhow, 2011). It also can be a low-cost, readily available option to simulate or enhance social interaction for people all over the world who have limited pedagogical access to education (Polsgrove & Frimming, 2013).

With a high percentage of students already using social media and discussing education through social media, social media can mirror a way in which students’ learn thus becoming a powerful social interaction tool to enhance learning in an environment that is comfortable and important in students’ lives.

3.3. Social media use in health and wellness

One goal of physical and health education is to empower learners to lead a life of health, wellness and informed decision making. The education gained during a K-12 education is important as students move to adulthood and through the many stages of their lives. It is important to understand how social media is being utilized in personal and community health/wellness programs outside of the K-12 education system as it will become a major source of education and knowledge following completion of a K-12 formal education.

There is a growing amount of research on social media use in health and wellness programs. The positive findings show that, at a minimum, learners benefit from the use of social media by acquiring knowledge, communicating and interacting with other learners, and building relationships with and between learners and instructors (Frimming et al., 2011; Hanson et al., 2011; Polsgrove & Frimming, 2013; Yarrow, 2012).

Frimming et al. (2011) found that 56.5% of learners who were in a fitness course received helpful information from the use of social media and 51.1% believed that the long-term use of social media benefitted their fitness and ultimately they felt more educated about fitness. 45.6% felt more comfortable in asking questions and gaining more knowledge from professionals. In looking at general health and wellness, social media is being utilized at high percentages and in many areas. 83% of internet users look for health information on the internet and 72% specifically said that they use social media. 63–74% have learned health and exercise information from the internet (Frimming et al., 2011). For the adults who utilize the internet for health and wellness information, most said that they preferred non-professionals through social media when dealing with a personal or coping issue (Yarrow, 2012). When dealing with a specific health issue, 40% specifically used Facebook for support and confidence in educating and dealing with the issue (Oh, Lauckner, Boehmer, Fewins-Bliss, & Li, 2013). In the study by Frimming et al. (2011), the authors investigated a social media experience in a health and fitness course. The results were that 56.5% of the learners received helpful information about health and fitness through the use of social media and 51.1% believed that their fitness would benefit from long-term access to the social media site. One response spoke of how the personalized/social aspect was better than using Google. 52.9% found the peer postings beneficial and 35.3% believed that beginners or people needing extended support could benefit via social media due to the constant connections to peers and professionals. The result from this study suggests that college student health literacy can be enhanced through social media.

Social media has the opportunity to develop relationships and partnerships in health and behavior changes thus increasing the communication, which can lead to increasing levels of education (Hanson et al., 2011). With physical and health education aspiring to foster lifelong healthy decision makers, it is important to look at the behaviors of adults as they maneuver through the process of making healthy decisions about their behaviors. As is the case in education, social support is a positive factor in a person’s health and well-being (Oh et al., 2013). This author also found that nearly 40% of individuals with a health concern used Facebook as a means of social support and seeking this online support was positively related to increased health self-efficacy. As is the case with education, social presence is positively related to increased health behaviors.

It is important to note that there is also research that has found social media to not be beneficial. In a randomized controlled study, Cavallo et al. (2012) found that social media use did not increase physical activity or social support in a physical activity intervention trial. Also issues surrounding misinformation and privacy with the use of social media are factors that must be addressed and researched (Yarrow, 2012).

While more research does need to be done on social media in education, it does seem to be important to begin researching social media in K-12 physical and health education.

3.4. Social media in K-12 physical and health education

There is very little research in the area of social media in K-12 physical and health education. The prior research on social media use in education in general, though not conclusive, does provide enough information to move forward with research on social media use in K-12 physical and health education.

Students in today’s world are already using social media in their educational setting. If increased social presence improves education and a large percentage of students are discussing education already then it would seem reasonable to say that social media use in a K-12 physical/health education environment can increase the educational experience and/or achievement. In a study done in South Africa, Chinomona (2013) found that the ease of use of the social media platform has a strong influence on the intention and experiences with using social media in a health education setting.

With prior research indicating a positive relationship between social interaction and education and that social media may increase social interaction, it is important to begin research on the social media effect on K-12 physical and health education.

4. Discussion

Physical and health education should be designed as a process for a lifetime of healthy decision making in living a physically and mentally healthy life. Physical and health education must be nurturing, empowering, motivating and engaging for all students as in all other content areas.

It seems clear that there is a large number of people who choose to use social media when making decisions or performing in the health and wellness area. It would seem prudent to explore the social media pedagogy in the K-12 physical and health education settings. If K-12 educators are preparing our students to enter the world, then it is important to be exposing them to the realities of that world.

The question of utilization of technology in education and in physical and health education is a contested area as technology continues to be present more and more in everyday life. The hesitancy to utilize technology may be attributed to a belief in the lack of sound pedagogy, although an important aspect of sound pedagogy is to fit teaching to the needs of the culture and understanding the current or modern day student actually learns best (Frimming et al., 2011). As has been shown above, social media is most certainly a part of students’ life. If the pedagogical strategies mirror the important aspects of our students’ lives then it
can empower the student to access and share the content (Frimming et al., 2011).

There is currently enough research indicating that social media (and technology in general) impacts education and thus impacts physical and health education. Physical and health education has a tremendous responsibility in aiding our solutions for increasing obesity statistics. While physical and health education continue to be reformed to better serve societal needs, social media simply cannot be ignored as a factor. Social interaction will continue to be an important aspect of physical and health education as we continue to change in how it is offered such as online and/or hybrid options. An obvious difficulty in online education is social interaction and how to maintain the positive effects it has on education.

Online and blended physical education has been an option since the Florida Virtual School began offering online physical education in 1997 (Stover & 41–42, 2005) and it is becoming more prevalent in our current educational system. In 2009–2010 over 1.5 million students chose to take physical education in an online or blended learning environment with 48 of the 50 states in the United States offering online/blended courses as an option for students (Mohnsen, 2012). It would seem very prudent to explore social media as an option to increase social interaction in an online/hybrid formatted course.

Currently social media does not seem to be utilized fully in K-12 education. Health educators use an average of three social media applications in their personal life compared to only 1.5 in their professional life (Hanson et al., 2011). Reasons for not using social media in their professional setting include social influence and performance expectancy. If social media was blocked at their work they were more likely to report lower intentions to use social media (Hanson et al., 2011).

18–29 year old teachers reported that social media would be easy to use, thus not taking much effort and removing that factor as a barrier, where as older health educators reported that this would be a barrier (Hanson et al., 2011). Intentions to use social media increase as perceived effort expectancy decreases. In order for health educators to participate more in using social media, they must perceive acceptance of it from important others. In other words if they think others value social media use, they are more likely to use it (Hanson et al., 2011). Another limiting factor is the set of policies (or lack thereof) where mistakes can lead to losing his or her job.

With online education becoming more popular as an option for physical and health education, social interaction needs to be maintained as a part of the pedagogy. Social media seems to be one way to provide and foster social interaction.

In knowing that social interaction has a positive impact on educational experience and that social media is being widely used by students and teachers in their personal life, and showing that social media can have a positive impact on health and wellness in personal and community wellness programs, there is a need to find the potential impact of social media in K-12 physical and health education.

Appendix A. National physical education standards

1. The physically literate individual demonstrates competency in a variety of motor skills and movement patterns.
2. The physically literate individual applies knowledge of concepts, principles, strategies and tactics related to movement and performance.
3. The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.
4. The physically literate individual exhibits responsible personal and social behavior that respects self and others.
5. The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction (American Alliance for Health, Physical Education, Recreation and Dance, 2013).

Appendix B. National health education standards

1. Students will comprehend concepts related to health promotion and disease prevention to enhance health.
2. Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
3. Students will demonstrate the ability to access valid information and products and services to enhance health.
4. Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
5. Students will demonstrate the ability to use decision-making skills to enhance health.
6. Students will demonstrate the ability to use goal-setting skills to enhance health.
7. Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
8. Students will demonstrate the ability to advocate for personal, family, and community health (Centers for Disease Control and Prevention, 2013).

References

Chaiprasurt, C., & Esichaikul, V. (2013). Enhancing motivation in online courses with mobile communication tool support: A comparative study. International Review of Research in Open and Distance Learning, 14(3).