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## 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.

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#### 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

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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 50% 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, & Caladine, 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.

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