DIFFERENCES IN GROUP EFFECTS IN VARSITY ESPORTS TEAMS AND TRADITIONAL VARSITY SPORTS TEAMS

(Kozachuk, Pierrend, Shytle, & Modianos 2015)

Cyberspace 2015 13th International Conference, Brno Czech Republic

The increasing popularity of new avenues of virtual teamwork team-based competitive video-games ("Electronic Sports") leaves an interesting gap in the literature concerning the differences between these new virtual teams and traditional teams. The present study investigated factors that influence a group's team cohesion in virtual sports and traditional sports teams. Of interest is whether the task itself, such as the sport or video-game (VG) being played (measured as play experience), or the manners of individuals on the team (social dominance) affect the dynamics and cohesiveness of the group (team cohesion). Students participating in an online varsity VG league upon completion of a 12-week competition were compared to college athletes through survey response. Our hypothesis that social dominance as a negative predictor and play experience as a positive predictor of cohesion was mildly supported by the experimental data. Of striking importance is the huge increase in cohesion (and other benefits) seen when those involved in team-based competitive VGs are given the opportunity to interact with peers interested specifically in this hobby, while these effects are not shown in traditional sports teams. The implications of this finding could be generalized to the realm of education, in that providing a suitable outlet for students to socialize and interact with a community of peers similar to themselves would allow positive academic and social benefits to students.

ROLE OF SOCIALIZATION OUTLETS AND ENVIRONMENTAL FACTORS ON VIRTUAL SPORTS TEAM PERFORMANCE

(Kozachuk, Pierrend, & Modianos 2015)

South-Eastern Psychological Association 62nd Annual Conference, New Orleans

The increasing popularity team-based competitive video-games leaves a gap in the literature concerning differences between these new 'virtual sports' teams and traditional sports teams. Students grouped into teams within their own school competed against other schools across the US/Canada in a competitive video-game, and performance was measured.The present analysis investigated the effect of the availability of a socialization outlet, prior participation in the competition, and the number of school-associated teams within the competition, on the performance of a particular team within a varsity sports league. It is hypothesized that the socialization outlet would be positively related to performance benefits, due findings in a previous study. The analysis was controlled for location, as there are significant performance differences within players that are located closer to the game servers (west coast) than those who are located further away (east coast). The study found that even after controlling for location, high schools with a socialization outlet (a school club based around their sport), had a higher performance, and had more teams signed up to participate. The study highlights previous study results of the importance of a socialization outlet (a high school club) based around their sport, in which- in addition to the previously found academic effects- it appears that performance effects are also being seen. Traditional sports teams typically have this in-person socialization component set-up within their competitive environment, and the addition of this component in a virtual sports team environment seems to provide significant benefits. The implications of this study can be generalized to the realm of after-school competitive activities, in which providing students an outlet to socialize with their peers on a topic of interest may positively affect their performance when put into a future competitive situation. Follow-up studies are currently being conducted with the results of this study in mind.

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ROLE OF HIGH QUALITY SOCIAL OUTLETS ON ESPORTS STUDENTS AND THE IMPORTANCE TO STAKEHOLDERS

(Kozachuk, Rupp, Gonzalez-Holland, & Modianos 2016)

Games User Research Summit, Game Developers Conference 2016, Redwood Shores

There is a strong link between participation in structured after-school activities and increased academic achievement among high school students, while engagement in solo activities such as Television Watching has been found to decrease performance in school (Cooper, Valentine, Nye, & Lindsay, 1999). However, much of this research was conducted on sports teams and other structured groups (e.g. church groups) leaving a critical gap of assessing the impact of team-based competition separate from traditional sports. With video-games as such a mainstream source of entertainment for youth, playing these games at a competitive level with friends has begun to follow a similar trend. Electronic sports, or "esports," refers to competitive video-game play, often played in organized teams. The aim of this research was to better understand what role, if any, organized competitive video-game play has on school performance and to perform an assessment of their suitability as a beneficial after-school activity. Previously, competitive video games have been criticized for increasing feelings of aggression and decreased academic achievement (Gentile, Lynch, Linder, & Walsh, 2004). While much of this research has been criticized (Ferguson, 2007) and esports are becoming an increasingly popular activity for young adults (Hollist, 2015), a dearth of studies are left in their place indicating addressing this research questions is a critical need in both the game and teamwork fields. The current research sought to assess this critical issue by measuring factors that influence team cohesion and academic performance among high school esport teams who played two different MOBA Games in a varsity circuit, and former traditional varsity sport team players (e.g. Football). Of interest was whether the team type (esports or traditional) impacted individuals' team cohesion at the time of play and the specific factors that influence academic performance of esport team members. Students participating in an online varsity video-game league, upon completion of a 12-week competition, and first year college athletes who have previously participated in traditional sports teams were surveyed about their high school team experiences. Students who participated in esport teams had similar academic achievement to traditional sport players; while esport players were rated lower in team cohesion measurements specifically relating to the task at hand- likely a result of the differences in physical medium of play and competition. Next we used an structural equation modeling analysis to determine the factors that influence team cohesion, motivation to play, and academic achievement within the esport players. As hypothesized, the amount of structure of the esport club was a moderate predictor of ($\beta = .14$, $p<.05$) academic performance (GPA, Number and percentage of honors classes taken) and the cohesiveness of the team ($\beta = .16$, $p<.05$). Additionally, self-reports of team performance was also associated with increased cohesiveness ($\beta = .32$, $p<.01$), but not motivation to play or academic performance. Amount of video-game play was associated with decreased academic performance ($\beta = -.15$, $p<.05$), indicating that it is participation in the esports team not video game play that drives increased cohesion and academic performance. Additionally, we found another indirect effect of team cohesion on academic performance as teams that were more cohesive had members who were more intrinsically motivated to play ($\beta = .56$, $p <.001$) which lead to further increased academic achievement ($\beta = .11$, $p<.05$). The practical implications of this finding could be generalized to the realm of education. Providing a suitable outlet for students to socialize and interact with a community of peers similar to themselves would allow positive academic and social benefits to students. An example of this would be the inception of an esports team at Guilford High School in Rockford, Illinois. With a substantial investment, Guilford created a high quality team and club experience for their students, which in turn has resulted in performance and academic benefits. Also, there is industry involvement, a good example of this is acquisition of collegiate community organizer, "TeSPA," by Blizzard Entertainment in 2013. This new partnership brings structured community environments to students. Through our research, we hypothesize this kind of environment is bound to produce similar academic benefits demonstrated by the high school students without our sample. This leaves an opportunity for companies to help further advance the structure of these clubs through other supporting partnerships, such as easing the monetary cost of these high quality experiences through product sponsorships, interactivity with these students, or other quality program-building processes. One might ask why

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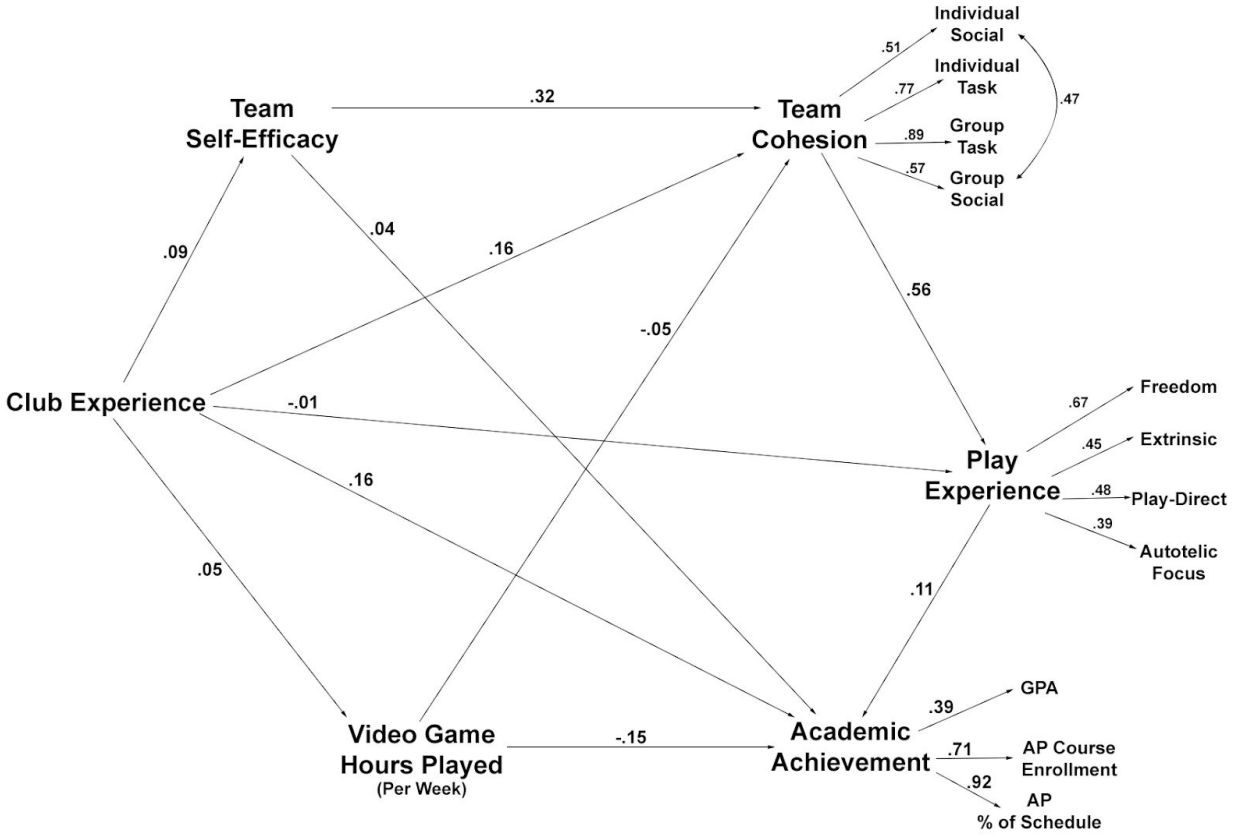
industry has been reluctant to invest in these teams: a misconception about the gaming community may be the answer. There is the common stereotype that avid video game players are seen as addicted which leads to further perpetuating the negative connotation that video game players are "low-class, proto-violent addicted and dangerous kids" (Beavis, 1998). This is due to the idea that game playing is addictive, which thus produces a particular form of gamer (Cover, 2006). This has had many implications on industry and development in the gaming world. This also leads to the question of the legitimacy of gamers and their authenticity as members of a broad community. There are opportunities to take this research even further: within the literature there are additional benefits which have not been addressed in the present sample. These potential benefits include an increase in prosocial behavior (Kataoka & Vandell, 2013). Further research is currently being conducted within this domain, and we hope to better understand the importance of these high quality socialization experiences and their benefits to students. Through dissemination of this research to teachers, educators, and school-board members we have better informed potential relevant stakeholders to this positive academic experience, who in turn have begun to take action to help reduce the archaic resistance to allowing these clubs on their campuses.



A 16-WEEK LONGITUDINAL PERSPECTIVE OF GROUP COHESION IN VIRTUAL SPORTS TEAMS

Data-Analysis Phase (Kozachuk & Modianos 2016)

We currently have a general understanding that virtual sports players are influenced by their game in similar ways to how traditional athletes are impacted by their sport (Kozachuk et. al 2015). With this in mind, the present study is designed to determine if these groups change over time in a similar fashion to traditional sports teams. High school students participating in an online varsity video-game (VG) league were recruited prior to the initial athletic season's matches began. These students were given a baseline measure of their cohesion as a team, as well as various factors identified by the research team and the literature to affect cohesion. The performance of these teams was carefully followed. This study is currently in-progress, but preliminary results seem to support this view that the cohesion of players within virtual sports teams change over time similarly to that of traditional sports teams. This potential finding closes the gap further between these new form of sports teams and that of traditional sports teams.

Research Questions:

1) Does one's competitive tournament experiences play a role in the potential academic benefits of this form of teamwork seen in Kozachuk, Pierrend, Shytle, & Modianos, 2015?
2) Does one's community/club experience play a role in the potential academic benefits of this form of teamwork?
3) Are there any differences in gender effects?

PANEL: APPROACHES FOR EXPLORING ELECTRONIC SPORTS

(Kozachuk, Foroughi, & Freeman 2016)

60th Annual Meeting of the Human Factors and Ergonomics Society 2016, D.C.

In this panel we will discussion current research involving these players in the fields of human-computer interaction, team dynamics, cognition, information processing, as well as the potential applications in other subfields. The panelists have both direct research and professional experience with electronic sports: Cyrus Foroughi will provide insight as a former professional-gamer, James Kozachuk has run multiple nationwide tournaments for college and high school students, and Dr. Guo Freeman has a robust background in studying social dynamics in multiplayer online games, and is using that knowledge to inform electronic sports research. This discussion panel will consist of ten-minute introductions by each of the panelists regarding their current relevant research and professional backgrounds, and will conclude the remainder with an open discussion panel.

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