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2018-08-07

## High School Physical Education and its Effects on Fitness Center Participation After Graduation: A Case Study

David C. Barney

*Brigham Young University, david\_barney@byu.edu*

Nathan Kahaialii

*Brigham Young University - Provo*

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## High School PE and Lifetime Fitness

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### Abstract

For those that send off their child into the world, it is hoped they will recall what was taught to them. This applies to high school (HS) physical education (PE) teachers and their students that graduate from HS. The purpose of this case study was to assess current HS PE teachers, fitness club personnel, those that frequent fitness clubs and current HS students regarding HS PE preparing HS students for real world application regarding fitness. Participants from these four groups were interviewed to help better understand the preparation of graduated HS students participating in health clubs. From this case study three of the four groups felt they had and were being prepared to be successful in health clubs and those activities that are found in health clubs. This study sheds light on the fact that HS PE is the last opportunity of a student to be involved in an organized class that has real world application.

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23           For many parent’s it is hoped that they have taught their children the proper skills that  
24 will help them be successful adults when they leave their homes to go out into the world. To a  
25 certain degree high school (HS) physical education (PE) teachers feel the same way about their  
26 students when they graduate and go out into the world. PE teachers hope they have taught their  
27 students the appropriate and necessary skills to be successful adults when it involves being  
28 physically active throughout their whole life. The National Association for Sport and Physical  
29 Education (NASPE, 2004) in the document regarding Appropriate Practices in High School  
30 Physical Education states the primary purpose of physical education is to help adolescents gain  
31 skills and knowledge to be physically active for a lifetime” (p.5). Also, along this line The  
32 Centers for Disease Control and Prevention (2001, p.7) has described the purpose of HS PE as  
33 “increasing student participation in moderate to vigorous physical activity and to help high  
34 school students gain the knowledge, attitudes, and skills they need to engage in lifelong physical  
35 activity.” These statements emphasize the impact HS PE can have on a student throughout their  
36 life.

37           Because of the impact HS PE can have on students, the Society of Health and Physical  
38 Educators (SHAPE America) has established national standards for K-12 grade levels (SHAPE  
39 America-Society of Health and Physical Educators, 2014). The purpose of national standards are  
40 to assist physical educators with what a student should know and be able to do (NASPE, 2004).  
41 Thus, these national standards guide physical educators in what and how they teach in their  
42 lessons and activities to students, so that student’s will know and be able to do throughout their  
43 life. National standards give substance to PE lessons and activities. Physical educators are not  
44 merely “rolling out the ball” during PE class, but have goals and objectives for the lessons and  
45 activities. The national standards consist of five standards. For each standard, they specifically

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46 address physical education for students in grades K-5, 6-8, and 9-12. The outcomes for HS  
47 students in PE are, “The learner will be college or career ready as demonstrated by the ability to  
48 plan and implement different types of personal fitness programs...model responsible behaviors  
49 while engaged in physical activity.” Standard three states, “Demonstrate the knowledge and  
50 skills to achieve a health-enhancing level of physical activity and fitness.” Within this standard  
51 HS physical educators are to teach HS students to implement a strength and conditioning  
52 program, to know how to keep their heart rate in the target zone, create methods of assessing the  
53 fitness activities and goals, and many other health related activities. One way HS PE can achieve  
54 these national standards is having student participate in activities that are commonly found in  
55 fitness clubs, during the students HS years. The purpose of this model in HS PE is to prepare  
56 students to be successful in a health club setting after they have left high school (Hastie, 2003).

57         The literature reveals the impact of the health club model, and the positive effects on  
58 students in their HS PE class. Timken, McNamee and Coste (2017) studied adolescent girls’  
59 perceptions of their health club experience in their PE class. For this study 17 female students  
60 participated in this study. For the lesson structure, 40% of the lesson was spent in cardiovascular  
61 activities, 40% in resistance training and 20% flexibility. Such activities students participated in  
62 during the lesson were Pilates, yoga, physioball, Tae Bo, and aerobic dance to name a few. The  
63 results from the student’s health club experience in their HS PE class was feelings of autonomy  
64 and relatedness. The researchers suggested that PE teachers should offer both variety and choice  
65 in PE classes to facilitate a students’ sense of autonomy and relatedness. Another study dealing  
66 with female HS student’s studied perceptions of selected fitness activities (Wilkinson &  
67 Bretzing, 2011). More specifically, female students preferred the fitness units. Also, the reasons  
68 for the female preference to the fitness units, were there applicability to fitness clubs. For this

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69 study tenth grade female students participated in fitness concepts for two-weeks. Students  
70 participated in aerobics, step aerobics, kickboxing, Pilates, core training (using mats, balls, bands  
71 and dumbbells) and fitness games. After the two-week units, students could then sign up for  
72 longer units (running the whole semester) to participate in. Prior to this tenth grade course,  
73 students participated in team and individual sport activity courses, during the 7<sup>th</sup> through 9<sup>th</sup>  
74 grades. Shortly after the longer fitness units, the students completed a questionnaire. Results  
75 from this study found that fitness activities were preferred for many reasons. Students voiced  
76 that fitness activities created a better environment for health benefits, were fun, the variety of the  
77 activities were good, and the fitness activities consisted of easier skills than sports. The  
78 researchers also stated that the students made connections that these fitness activities could be  
79 done throughout their lives.

80 Barney, Pleban, Wilkinson, and Prusak (2015) studied college students' HS PE  
81 experience on their physical activity after HS. For this study, over one thousand students were  
82 surveyed. College students that were surveyed, tended to want to have attained skills in HS PE  
83 that they could use throughout their lives, such as golf, tennis, outdoor activities and weight  
84 training. A large majority of the college students in this study were not exposed to lifetime  
85 activities. An interesting point from this study was that when these college students were in HS  
86 PE, many enjoyed and excelled in team sports activities (basketball, volleyball, softball, etc.),  
87 which many of their PE teachers instituted in their HS PE courses. Yet, in hindsight, these  
88 college students indicated a desire of having been taught and exposed to activities that would  
89 have been beneficial to them later in life. Another point from this study was that the college  
90 students felt that they were not given the knowledge and skills to be successful being physically  
91 active throughout their lives. With these kinds of results HS PE teachers are in a position of

92 exposing HS students to activities in which they can have success throughout their lives. With  
93 these results from the literature, the purpose of this case study was to assess current HS PE  
94 teachers, fitness club personnel, those that frequent fitness clubs and current HS students  
95 regarding HS PE preparing HS students for real world application regarding fitness.

96 **Methods**

97 For this case study, a case study methodology will be used. Shulman (1992) has stated  
98 that case studies as a method of research are suited to education as they contain the potential to  
99 communicate that teaching in a complex endeavor demanding subtle judgements and decisions.  
100 This also applies to teaching HS PE. Studying cases provide the opportunity for generalizations  
101 and knowledge transfer through the process of engagement in the ideas as they appear (Eisner,  
102 1991).

103 **Participants**

104 The participants for this case study were five current female HS PE teachers with 1 to 25  
105 years of teaching experience, four fitness center personnel and four (2 males and 2 females)  
106 adults that workout at the local fitness centers, and three high school students (1 male and 2  
107 females (See Figure 1).

108 **Procedures**

109 For this case study, the participants were interviewed relating to their connection to the  
110 case being investigated. The interviews were semi-structured and were audio-recorded. The  
111 interviews were designed to get the participants perspective relating to HS PE and their activity  
112 in their local fitness center and eventually participation in a fitness center. Interviews were  
113 generally 20 minutes in length and was transcribed and analyzed. For the analysis of the  
114 interviews, participant responses were correlated and reviewed to generate preliminary coding

115 categories, with framework analysis methodology for participant responses, as outlined by Check  
116 and Schutt (2011). Framework analysis incorporated the stages of 1) familiarization, 2)  
117 thematic, 3) identification, and 4) charting and interpretation (Rabiee, 2004). Additionally,  
118 investigators secured university institutional review board (IRB) approval to conduct the study.

## 119 **Results**

120 Themes emerged from the interview data, which is presented in this section from the  
121 transcribed interviews. The following themes from the data came from the four groups of  
122 participants: 1) fitness center personnel, 2) HS PE teachers, 3) Participants of the fitness center,  
123 and 4) current HS students that were enrolled in a PE class.

### 124 **Fitness Center Personal**

125 The fitness center personnel was of the opinion that participants that recently graduated  
126 from HS weren't as knowledgeable when they first come to the fitness center. Bob a manager of  
127 one of the fitness center stated:

128 "From my observations, people that have recently graduated from HS come to the  
129 fitness center with a look of uncertainty. When this happens, we give them a personal  
130 trainer to help them get started and to become confident in their surroundings. I feel if  
131 the trainer helps with what they want there is a higher likelihood that this person will  
132 keep coming back to the fitness center to work out. This is good business for the  
133 company."

134 Another theme that came up from the fitness center personal was that the fitness center focuses  
135 on functional fitness. Ann, one of the HS PE teachers that participated in this study described  
136 functional fitness as "those things that use multiple systems of the body simultaneously just as  
137 we would use them in our ever day lives." Josh, one of the fitness center personal stated:

138 “Here at our fitness center we emphasize functional fitness. We have elliptical  
139 machines, weight machines, yoga and Zumba that are offered. Right now, functional  
140 fitness is a popular workout in the fitness industry, the going thing, so this is what we  
141 present to our clients. The graduated HS student that comes to our center say they have  
142 heard of functional fitness, but didn’t do it as much in HS PE. We are more than happy  
143 to introduce them to the concepts and exercises dealing with functional fitness.”

144 **HS PE Teachers**

145 The HS PE teachers strongly felt they were preparing their students to be successful at  
146 the local fitness centers. The HS PE teachers were asked if their students were to walk into the  
147 local fitness center would they know what to do and have a successful workout. Ann stated:

148 “We expose our students to the things they will find at a fitness center. They learned  
149 how to use the cardio machines effectively, they learned how to use machines and free  
150 weights correctly. Our teachers were licensed in various fitness exercises (i.e. crossfit,  
151 Zumba, kickboxing, etc.). So, if students were to go to a gym they would find people  
152 with the exact same skills and expertise as their HS PE teachers. And they would not be  
153 intimidated by the weight slamming, the number of people in a class, or any of the  
154 equipment. They know how to use it and us it well! The other thing our students know is  
155 the lingo and the literacy used in a fitness facility.”

156 Another theme that came from the HS PE teachers was that their students will be informed  
157 consumers when it comes to using a fitness center. Ann’s statement above touches upon her  
158 students being informed consumers. Rebecca also feels her students will be informed consumers  
159 when she stated:

160 “Every activity we teach at Rocky Mountain High School (pseudonym name for



161 the school) is geared towards graduating educated consumers who feel confident in  
162 participating in many group fitness activities and individualized training programs. Our  
163 PE activities are all taught in local gyms and recreation centers so that after graduation,  
164 students can participate in a variety of activities to maintain personal fitness.”

165 **Participants at the Fitness Center**

166 A theme that came from those that currently use their local fitness center was the  
167 emphasis of weight training throughout their life. Jon stated:

168 “When I was in HS, my PE teacher had us work on upper body one day, the next  
169 day work on lower body. As a class, we would rotate our lifts. This has stuck with me to  
170 this day. When I was in HS I thought you lifted as much as you could and often. My HS  
171 PE teacher taught that your body needs a day off. I still use this principle in my work  
172 outs.”

173 Another perspective dealing with this theme came from Stan when he stated:

174 “It was impressed upon me that importance of physical activity and all the ways to be  
175 physically active. Yet, I felt I wasn’t taught the lifts that would help me maintain my  
176 muscle and strength through lifting weights. When I went to the gym I observed other  
177 lifting and saw how they were doing them. I would also look on online at certain lifts  
178 and how to execute the lift correctly.”

179 **Current High School Students**

180 One of the themes that current HS students discussed regarding their experience in their  
181 PE class dealt with feeling confident and comfortable when they would use the local fitness  
182 center. Clark stated:

183 “In HS we used free weights. I was taught a variety of lifts that were helpful for

184 me. I also have a knowledge of the safety of lifting. One other thing we were taught was  
185 the proper mechanics of lifting so that we wouldn't hurt ourselves when we lifted."  
186 Another theme discussed was when they work out at the local fitness center, they would  
187 like and appreciate working out with a friend. Amy stated, "I plan on working out at the  
188 fitness center after I graduate from HS. But, I will do it with a friend. I don't think it  
189 would be as overwhelming." Susan stated, "working out doesn't bother me. I would just  
190 like to do it with a friend."

### 191 **Discussion**

192 The purpose of this case study was to assess current HS PE teachers, fitness club  
193 personnel, those that frequent fitness clubs and current HS students regarding HS PE preparing  
194 HS student for real world application regarding fitness. From this case study, HS PE is teaching  
195 and exposing HS students to lifetime activities to promote their health and personal wellness  
196 (Pangrazi, 2003). From the HS PE teacher perspective, they feel they are putting their students  
197 in a position to know how to be physically active in a fitness center or in other contexts. One of  
198 the HS PE teachers stated that the activities the students are exposed to, make it possible for  
199 them to not be intimidated when they walk into a fitness center or other activity settings. Gentry  
200 and Escalante (2018) suggested that HS PE teachers need to expose HS students to lifetime  
201 activities to better prepare them to be physically active in their lives. The HS PE teachers in this  
202 case study feel they are achieving this in their classes. The fitness center personnel were of the  
203 opinion that not all recently graduated HS students come to their center confident and/or  
204 comfortable when they first come to the center. These findings are similar to Westcott's (1992)  
205 findings, dealing with recently graduated HS students. These fitness center personnel feel that  
206 when they are instructed by their trainers there is a strong likelihood that these recently

207 graduated HS students will continue to attend their center. With this being said one of the fitness  
208 center personnel feels this good business for their company. This strongly implies that the  
209 fitness center personnel are interested in the financial profits that will come to the center.

210         The participants of the fitness center looked upon their HS PE experience as shaping their  
211 attitudes towards being physically active. One of the participants stated that when she was in HS  
212 the PE teacher continually stressed the importance of being physically active. One of the HS PE  
213 teachers in this case study stated that she informs her students why the activities the students are  
214 participating in are important to them. She stated, “I want them to know the “why’s” of what  
215 they are doing in class.” And finally, for the current HS students at this stage in their life feel  
216 they can have success in a fitness center after they graduate from HS. They expressed enjoying  
217 the curriculum in their classes, which gives them the confidence to continue their physical  
218 activity at a fitness center. These findings are opposite of what Rikard and Banville (2006)  
219 found with HS students. One of their findings from their research was that HS students did not  
220 like fitness activities and that other units in the curriculum were monotonous. Another opinion  
221 voiced by the current HS students was that when they graduate from HS and start to attend their  
222 local fitness center they would feel more comfortable having a friend with them when they  
223 attend the fitness center. This finding emphasizes the importance of the sociality in a physical  
224 activity context. Hohepa, Schofield and Kolt (2006) identified friends playing a large part in HS  
225 students continuing to be physically active. It was mentioned that friends can serve as  
226 motivation when exercising and also helping to maintain and stay with their physical activity.

227         This case study analyzed four groups that have or had a stake in HS PE. The four groups  
228 have shed light on the importance of HS PE preparing students to be successful in a fitness  
229 center context after graduation. High school PE is the last opportunity for HS students to be

230 exposed to structured lessons and activities (Barney & McGaha, 2006 & Smith & Lounsberry,  
231 2013). With this being the last opportunity for HS students, this can affect their attitudes towards  
232 being physically active throughout their life.

233 **Conclusions**

234 The purpose of this case study was to assess current HS PE teachers, fitness club  
235 personnel, those that frequent fitness clubs and current HS students regarding HS PE preparing  
236 them for real world application regarding fitness. The investigators anticipated that the four  
237 groups would shed light on their perspectives regarding HS PE and its effectiveness. From this  
238 case study, the HS PE teachers are in the best position to be a positive and lasting influence on  
239 their students. The HS PE teacher is preparing their students to be independent and smarter  
240 consumers of their fitness choices. In so doing HS PE teachers are helping their students feel  
241 confident when they participate in their local fitness center. Barney et. al., (2015) stated, “High  
242 school physical educators are in a position to influence students to participate in regular and  
243 practical physical activities throughout their lives by exposing them to activities in which they  
244 can participate throughout their lives.” A final conclusion is that HS PE is an important part of a  
245 students’ education. It provides the HS student with the knowledge, with experiences to make  
246 applications to benefit their life through being physically active. Pangrazi (2003) stated, “A key  
247 measure of success at this level (HS PE) is whether students can interface successfully in  
248 community and sport clubs.” From the four groups that participated in this case study, HS PE is  
249 that part of the students’ education that can aid them throughout their lives.

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299 Figure 1. The interrelationship between HS PE teachers, fitness club personnel, fitness center  
300 participants and current HS students  
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