



SPORT EDUCATION IN A HIGHER EDUCATION PHYSICAL ACTIVITY COURSE

Mauro Henrique Andréⁱ, Peter Hastieⁱⁱ

ⁱCarnegie School of Sport, Leeds Beckett University

ⁱⁱSchool of Kinesiology, Auburn University

Abstract:

The present research had the purpose to analyze how students perceived a physical activity (PA) course in higher education that used the Sport Education (SE) model. The study addressed: i) Students overall enjoyment; ii) Students' skill acquisition self-perception; iii) Students' game rules knowledge self-perception; iv) Students' instructional preference. Twenty-six students from an American university located in the Southern region attended this course. The Futsal (indoor-soccer) course offered two 75 minutes class per week. Two forms of data collection were used: a five-point Likert-type scale survey and a post-course interview. Students reported to have a very high enjoyment in all six major features of the SE model. In addition, statistical significance was reached when students reported their perceived skill acquisition and game rules knowledge acquisition. Students also reported to prefer SE when comparing to other physical activity courses that used a traditional pedagogy.

Keywords: education, higher education, physical activity

1. Sport Education in a Higher Education Physical Activity Course

In the United States, there are almost 400 universities that offer physical education/physical activities courses for undergraduates. In 1998, 63% of higher education institutions offered physical activity courses as a requirement to graduate (Hensley, 2000). More recently, Kulinna, Warfield, Jonaitis, Dean, & Corbin (2009) have reported that 90% of the 161 universities that were surveyed in their study offered physical activity courses. Physical activity courses in higher education were identified as

ⁱ Correspondence: email m.h.andre@leedsbeckett.ac.uk

important gateways to teach values, skills knowledge, and regular physical activity participation (Corbin & Cardinal, 2008; Kulinna et al., 2009; Strand, Egeberg, & Mozumdar, 2010). Leenders, Sherman, and Ward (2003) also reported the top five reasons for enrolling in physical activity courses in higher education: (1) learning a new activity (20%), (2) having fun (18%), (3) improve skills (11%), (4) improve fitness (9%), (5) exercise regularly (9%).

Considering these findings, it would be important to provide an educational experience that delivers a course with multiple opportunities to learn a physical skill with high level of motivation and physical activity engagement. Considering the overwhelming number of negative physical education experiences that is so commonly reported in many K-12 classes (Ennis, 1996; Sidwell & Walls, 2014), it is also important to avoid a negative physical activity courses experience in higher education. Moreover, it has also been suggested that these negative experiences have a significant impact of active lifestyles (Cardinal, Yan, & Cardinal, 2013).

A few studies have addressed specific populations that have been historically marginalized from higher education physical activity courses while considering adaptations to include students with disabilities (Braga, Tracy, & Taliaferro, 2015) and physical activity courses specially designed for women (Foster & Appleby, 2015). Therefore, seeking to further our understanding on how to provide a better physical activity course in the higher education, besides studying specific populations, it would also be beneficial to research students reactions while alternative teaching pedagogies that consider students' educational needs and interests. Many instructional models that have been developed to be implemented in K-12 education settings could also be considered in higher education and examine their fit and/ or possible modifications that would need to be adapted (Metzler, 2005). Among many possibilities, Sport Education (Siedentop, 1994) can be advocated as a good fit with this population as it seeks to provide an authentic sport experience to all participants (Bennett & Hastie, 1997).

Sport Education is an instructional model that seeks to provide a more authentic sport experience by including 6 major features: (1) seasons, (2) team affiliation, (3) formal competition, (4) record keeping, (5) a culminating event, and (6) festivity. Within a season of Sport Education, students are grouped in a single team for the entire teaching unit (in this case for the entire duration of the course/ semester), compete in a formalized championship that includes all stages (team practice, preseason, season and postseason) and the festivity of sportive events (flags, uniforms, mascots), having their game performance tracked in statistics, and terminating their experience in a culminating event that includes awards that celebrates their performance and learning progression (Siedentop, Hastie, & der Mars, 2011).

In order to ensure the organization of all these features, students are given different organizational and instructional roles within their teams (e.g. coach, manager, fitness trainer, statistician, journalist). Empowering students with responsibilities that go beyond the playing activity provides a holistic understanding and appreciation of sports, therefore enhancing students learning experience.

During a 16-week class of Futsal (indoor soccer), a cohort of college students experienced the course according to the principles of Sport Education. In addition, the students contributed to a wiki that was designed to represent the official website of their Futsal Championship, extending their engagement beyond class and optimize their learning as suggested in previous research (André, 2013; Luguetti, Goodyear, & André, 2017).

Within the completion of this course, the instructor analyzed how students perceived a physical activity course in higher education that used the Sport Education model. More specifically, the study addressed the following research questions: i) Students overall enjoyment in each Sport Education's six major features; ii) Students' self-perception regards their skill acquisition; iii) Students' self-perception regards their game rules knowledge acquisition; iv) Students' instructional preference when comparing other physical activity classes and the Sport Education model.

2. Methodology

2.1 The course settings and students

Twenty-six students (19 male, 7 female) from a university in the southern United States attended this course. The university enrolled around 25,000 students of which 84% were undergraduate.

The Futsal course offered two 75 minutes class per week, totalizing in 32 classes that were taught during the 16 weeks of the fall semester. Futsal is the name given to the international rules of indoor soccer. The game is played with five players on each side and with a smaller and heavier ball (comparing to the outdoor soccer) that requires more skill and agility. Due to its particularities, most students enrolled in this course had to learn about specific rules, strategies and skills. The Sport Education model was introduced to the students on the first day of class, clarifying how each of the six components (season, team affiliation, competition, record keeping, culminating event, festivity) related to the learning expectations and how it affected their participation in class and out-of-class assignments. In addition, the wiki was also introduced which showed the work of previous classes who had used this tool (see André, 2013). The remaining sessions of the course were organized into five sections: (1) general preparation; (2) practice; (3) pre-season; (4) season; (5) post-season.

The general preparation lessons lasted for three weeks and focused on basic Futsal skills that were all taught by the class instructor. On the last day of preparation, students were divided into six teams of four to five players each. The practice section lasted for two weeks and focused on teams practicing by themselves followed by short games in which they could experiment with their specific tactical approaches. During this practice phase, the instructor also introduced the four officiating roles (coach, referee, one or two record keepers, manager) that students would have to perform while they were not playing the game. It was also during the practice session that students chose the country for their team, chose their team colors and developed their wiki page.

The pre-season lasted for two weeks and focused on friendly games and training to perform their roles while organizing other students' games (e.g. ensure that record keepers understood all statistics that they were conducting). The season lasted for five weeks, having four official games per class (two concomitant games at a time) and ensuring that all students would both perform and organize games in all classes. The post-season lasted for two weeks, including the playoff games, final and championship awards. The playoffs were organized in a manner that eliminated teams would play against each other to determine their final position, ensuring that all teams would play the same amount of games. The awards recognized students' accomplishments in both playing and organizational roles. Examples included the most improved players and best referees.

2.2 Data Collection

Two forms of data collection were used to address students' perceptions. All 26 participants answered a five-point Liker-type scale survey (See Appendix) which gave students the opportunity to express their perception regards their (1) overall enjoyment; (2) skill level before/ after the season; (3) game rules understanding before/ after the season; and (4) preference when comparing traditional PE classes and the Sport Education model (Mohr, Townsend, Rairigh, & Mohr (2003). Nine (5M, 4F) of these participants also participated in post-course interviews in which they were encouraged to discuss their overall experience, justifying the factors that enhanced their enjoyment and learning. At least one player from each team participated in the interviews. All data collection was performed in the last week of class, therefore at the very end of their experience so they would be able to compare how much they have learned and how much they have enjoyed when comparing to previous instructional models.

2.3 Data Analysis

The data analysis included statistical as well as qualitative analysis. All four research questions were answered using Mohr et al. (2003) Sport Education survey. To report students' overall enjoyment a descriptive statistical analysis was developed for each Sport Education major feature. To report students' self-perception regarding skill and game rules knowledge acquisition a paired t-test statistical analysis was conducted considering their rated skill and rules knowledge before and after the season. To report students' instructional model preference, a paired t-test statistical analysis was conducted considering their rated score for the Traditional instruction and the Sport Education instruction.

At last, the data obtained from the interview received a systematic process of inductive analysis and comparison among different responses having the protocols proposed by Denzin and Lincoln (1994) and Lincoln and Guba (1985). When accumulative data confirmed the same concept, themes were generated.

3. Results

The results of this research are presented in accordance with the four research questions. Thus, students' perceptions of the Sport Education model are presented in the following order: i) Students overall enjoyment; ii) Students' perceptions regarding skill acquisition, rules knowledge acquisition and instructional preference (Traditional versus Sport Education model); iii) Students' learning perceptions of the Sport Education unit.

3.1 Students' overall enjoyment

Table 1 shows the students' mean responses and standard deviations regarding their level of enjoyment for each of the six Sport Education components. Higher scores represented higher levels of enjoyment.

Table 1: Students' responses in a five point Likert-type scale regarding their level of enjoyment in the six major components of the Sport Education unit

Sport Education Feature	M	(SD)
Season	4.04	(1.00)
Team Affiliation	4.12	(0.90)
Competition	4.19	(0.86)
Culminating Even	3.92	(1.08)
Record Keeping	4.19	(0.80)
Festivity	3.96	(1.16)

3.2 Students' learning acquisition perceptions and instructional preference

Table 2 presents students' perceptions regarding their accomplishments during the Sport Education season. Higher scores represented higher perception of learning. Results from a paired t-test show that the students believed they had made significant gains in both skill development and understanding of rules. In addition, these students rated the experience of Sport Education as preferable to their previous experiences with physical activity classes at the collegiate level.

Table 2: Students' responses regard their self-perception learning and teaching methodology preference (Traditional or Sport Education)

Condition	M	(SD)	t (25)	p
Skill (before season)		6.00 (2.32)	-5.33	.000**
Skill (after season)		7.42 (1.50)		
Rules (before season)		5.12 (2.88)	-6.50	.004*
Rules (after season)		8.19 (1.58)		
Traditional PE	7.73	(2.15)	-5.43	.000**
Sport Education	9.08	(1.65)		

*p < .01 ; **p < .001

3.3 Students' learning experience perception in the Sport Education unit

Seeking to gain a better understanding about the Sport Education unit major contributions for students learning and experience, the research also conducted interviews with nine of these students. Five themes were generated from the interviews. The first theme was that "team affiliation played an important role". All students reported the significance of playing with a single team for most of the semester. A female participant quote may illustrate this matter: "Playing in the same team helped me to improve the most because I was comfortable with my mates and we got to work together."

The second theme was that "students perceived Sport Education as more serious than traditional physical activity courses". Students reported that while engaging in a championship format, all students took the class more serious and as the season progressed this became even more evident. As stated by a student: "As the postseason started the intensity of play has gone up and all students seemed to enjoy this competition, this is a new experience for us as other classes [physical activity courses offered in the university] do not seem to show this progression." Moreover, as they took their learning more seriously,

they also appreciated their development as reported by another student: *"I feel that I am finally getting better as a goalie and at an important time of the championship."*

The third theme was that *"students enjoyed learning by observing peers during officiating roles"*. Students reported that they also enjoyed their time when not playing games (i.e. the time in which they were undertaking their officiating roles). A student stated that *"I like the roles and the jobs [e.g. writing on the wiki] we have to do as we learn from this experience and it is still part of the championship"*

The fourth theme was that *"students enjoyed making/using the wiki"*. Students reported that they liked the wiki as it gave both a sense of professionalism to the championship as well as an opportunity for being creative and engaging with officiating roles. One of the students stated: *"It was amazing to see what some of my peers did: some wrote really funny stories and others included really funny pictures, and we were able to follow the standings regularly."*

The fifth theme was that *"students felt it is important to have a knowledgeable instructor."* Students reported that they have taken physical activity classes in which the instructor did not know much about the sport/ activity and/or how to teach it, hence they argued that it was crucial that not only the format of the class was good, but also the instructor knowledge and delivery was important. One of the students stated: *"He [the instructor] gave us really good feedback, sometimes, he would play as goalie [when a team was missing a player] and he worked as a coach that would help organize the team."*

4. Discussion

The higher education Sport Education intervention found similar outcomes to the ones found in K-12 physical education settings. Like Ka and Cruz (2006, 2008) that examined high school students in both studies and MacPhail, Gorely, Kirk and Kinchin (2008) that examined fifth grade students, the participants from this study also reported to be highly supported to all six components of the Sport Education mode, showing a high level of enjoyment.

Moreover, other studies have also reported similar findings in regards to students' learning. Browne, Carlson and Hastie (2004) and Hastie, Sinelinikov and Guarino (2009) were able to report skill development while conducting Sport Education units in junior high schools. Likewise, students were able to report a better understanding of the rules as it was reported by Hastie and Curtner-Smith (2006) on a Sport Education unit in a middle school.

Team affiliation is probably the most common finding reported in many different grade levels (Hastie & Sinelinikov, 2006; Ko, Wallhead & Ward, 2006; Pill, 2008; Sinelinikov & Hastie, 2008; Fittipaldi-Wert et al., 2009), being also confirmed in higher

education. Perceiving Sport Education as being more serious has also been reported (Sinelinikov & Hastie, 2010) as students are given more responsibility and required to be held accountable.

5. Conclusion

Within a semester long intervention, Sport Education has shown to be an appropriate model that is able to enhance students learning and also keep them highly motivated within the university setting. In addition, students were able to extend their classroom learning when developing their wiki team page, enhancing some of the Sport Education main features (e.g. score keeping as all player statistics were posted online and festivity as students posted pictures and drawings related to the country they had chosen).

Although Sport Education has been introduced in PE for over twenty years and findings have reported very supportive data in K-12 settings, it has not been given much consideration in higher education. The present intervention presents supportive data for the incorporation of Sport Education in higher education. Nonetheless, more interventions are needed to ensure its effectiveness with different sports/ activities, school size and audience.

References

1. Andre, M. H. (2013). Futsal in higher education: A novel sport education experience. *Research Quarterly for Exercise and Sport*, 83(33), 291-296.
2. Braga, L., Tracy, J. F., & Taliaferro, A. R. (2015). Physical Activity Programs in Higher Education: Modifying Net/Wall Games to Include Individuals with Disabilities. *JOPERD: The Journal of Physical Education, Recreation & Dance*, 86(1), 16–23.
3. Bennett, G., & Hastie, P. (1997). A Sport Education Curriculum Model for a Collegiate Physical Activity Course. *Journal of Physical Education, Recreation & Dance*, 68(1), 39–44. doi:10.1080/07303084.1997.10604876
4. Browne, T.B.J., T.B. Carlson, and P.A. Hastie. (2004). A comparison of rugby seasons presented in traditional and sport education formats. *European Physical Education Review* 10 (2), 199–214.
5. Cardinal, B. J., Yan, Z., & Cardinal, M. K. (2013). How Much Do They Affect Physical Activity Participation Later in Life? *JOPERD: The Journal of Physical Education, Recreation & Dance*, 84(3), 49–54.

6. Corbin, C. B., & Cardinal, B. J. (2008). Conceptual Physical Education: The anatomy of an innovation. *Quest*, 60, 467-487.
7. Denzin, N.K., & Lincoln, Y.S. (1994). *Handbook of qualitative research*. Thousand Oaks, CA: Sage.
8. Ennis, C. D. (1996). Students' Experiences in Sport-Based Physical Education: [More Than] Apologies are Necessary. *Quest*, 48(4), 453-456.
9. Fittipaldi-Wert, J., S.J. Brock, P.A. Hastie, J.B. Arnold, and A. Guarino. 2009. Effects of a sport education curriculum model on the experiences of students with visual impairments. *Palaestra* 24, no. 3: 6–10.
10. Foster, E., & Appleby, K. M. (2015). Breaking Barriers: Women-centered Physical Education Programming in Higher Education. *JOPERD: The Journal of Physical Education, Recreation & Dance*, 86(6), 29–34.
11. Hastie, P.A., and M.D. Curtner-Smith. 2006. Influence of a hybrid sport education – Teaching games for understanding unit on one teacher and his students. *Physical Education and Sport Pedagogy* 11, no. 1: 1–27.
12. Hastie, P.A., and O.A. Sinelnikov. 2006. Russian students' participation in and perceptions of a season of sport education. *European Physical Education Review* 12, no. 2: 131–50
13. Hastie, P.A., O.A. Sinelnikov, and A.J. Guarino. 2009. The development of skill and tactical competencies during a season of badminton. *European Journal of Sport Science* 9, no. 3: 133–40.
14. Hensley, L. D. (2000). Current Status of Basic Instruction Programs in Physical Education at American Colleges and Universities. *Journal of Physical Education, Recreation & Dance*, 71(9), 30–36. doi:10.1080/07303084.2000.10605719
15. Keating, D., Wallace, J., Schafer, J., O'Connor, M., Shangguan, R., & Guan, J. (2012). Analyses of Higher Education Conceptual Physical Education Courses. *ICHPER -- SD Journal of Research in Health, Physical Education, Recreation, Sport & Dance*, 7(2), 38–45.
16. Ko, B., T.T.Wallhead, and P.Ward. 2006. Professional development workshops – What do teachers learn and use? *Journal of Teaching in Physical Education* 25, no. 4: 397–412.
17. Kulinna, P. H., Warfield, W., Jonaitis, S., Dean, M., & Corbin, C. B. (2009). The progression and characteristics of conceptually based fitness/wellness courses at American universities and colleges. *The Journal of American College Health*, 58, 127-131
18. Leenders, N. Y. J. M., Sherman, W. M., & Ward, P. (2003). College Physical Activity Courses: Why Do Students Enroll, and What are Their Health

- Behaviors? *Research Quarterly for Exercise and Sport*, 74(3), 313–318.
doi:10.1080/02701367.2003.10609096
19. Lincoln, Y.S., & Guba, E. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.
 20. Luguetti, C., Goodyear, V. A., & André, M. H. (2017). "That is like a 24 hours-day tournament!": using social media to further an authentic sport experience within sport education. *Sport, Education and Society*, 1–14.
<http://doi.org/10.1080/13573322.2017.1292235>
 21. Metzler, M. W. (2005). *Instructional models for physical education*. Holcomb Hathaway, Publishers. MacPhail, A., T. Gorely, D. Kirk, and G. Kinchin. 2008. Children's experiences of fun and enjoyment during a season of sport education. *Research Quarterly for Exercise and Sport* 79, no. 3: 344–55.
 22. Mohr, D. J., Townsend, J. S., Rairigh, R., & Mohr, C. (2003). Students' perceptions of sport education when taught using the pedagogical approach to sport education (PASE) planning and instructional framework. *Research Quarterly for Exercise and Sport*, 74, A51-52.
 23. Pill, S. 2008. A teacher' perceptions of the sport education model as an alternative for upper primary school physical education. *ACHPER Australia Healthy Lifestyles Journal* 55, no. 2: 23–29.
 24. Sidwell, A. M., & Walls, R. T. (2014). Memories of physical education. *The Physical Educator*, 71(4), 682–697.
 25. Siedentop, D. (1994). *Sport education: Quality PE through positive sport experiences*. Human Kinetics Publishers.
 26. Siedentop, D., P. Hastie, and H. van der Mars. 2011. *Complete guide to Sport Education*. Champaign, IL: Human Kinetics.
 27. Ka, L.C., and A. Cruz. 2006. The effect of sport education on secondary six students' learning interest and collaboration in football lessons. *Journal of Physical Education and Recreation (HK)* 12, no. 2: 13–22,
 28. Sinelnikov, O., and P. Hastie. 2008. Teaching sport education to Russian students: An ecological analysis. *European Physical Education Review* 14, no. 2: 203–22.
 29. Sinelnikov, O.A., and P.A. Hastie. 2010. A motivational analysis of a season of sport education. *Physical Education and Sport Pedagogy* 15, no. 1: 55–69.
 30. Strand, B., Egeberg, J., & Mozumdar, A. (2010). Health-related fitness and physical activity courses in U.S. colleges and universities. *The ICHPER-SD Journal of Research*, 5(2), 17-20.

Appendix

Sport Education Season Survey

Directions: Rate each statement below by circling the one score that best describes your feelings about the statement. In addition, tell why you rated the statement the way you did.

Statement 1. I enjoyed the _____ season because it was longer than a typical unit in P.E.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

Why do you feel this way?

Statement 2. I enjoyed being placed on a team early in the season and staying on the same team for the entire season.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

Why do you feel this way?

Statement 3. I enjoyed the schedule of team practice and formal competitions throughout the _____ season.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

Why do you feel this way?

Statement 4. I enjoyed the culminating event (the final four) at the end of the _____ season.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
-------------------	----------	-----------	-------	----------------

1	2	3	4	5
---	---	---	---	---

Why do you feel this way?

Statement 5. I enjoyed having access to scores and records (stats) for my team and me.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
-------------------	----------	-----------	-------	----------------

1	2	3	4	5
---	---	---	---	---

Why do you feel this way?

Statement 6. I enjoyed the festive nature of the _____ season using things such as team names, colors, mascots, and posters, player introductions and commentators, etc.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
-------------------	----------	-----------	-------	----------------

1	2	3	4	5
---	---	---	---	---

Why do you feel this way?

Statement 7. I learned a lot about the sport of _____ during this season in P.E.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
-------------------	----------	-----------	-------	----------------

1	2	3	4	5
---	---	---	---	---

Why do you feel this way?

Rate from 1 to 10 how skillful you are at the game of _____

BEFORE THE SEASON

1	2	3	4	5	6	7	8	9	10
Very poor									Very good

AFTER THE SEASON

1	2	3	4	5	6	7	8	9	10
Very poor									Very good

Rate from 1 to 10 how much you think you know about the game of _____ (rules, techniques, tactics, etc)

BEFORE THE SEASON

1	2	3	4	5	6	7	8	9	10
Very little									Very much

AFTER THE SEASON

1	2	3	4	5	6	7	8	9	10
Very little									Very much

Rate from 1 to 10 how much you enjoyed this season and participated with enthusiasm

1	2	3	4	5	6	7	8	9	10
Very little									Very much

FINAL

From 1 to 10, indicating how much you like physical education BEFORE experiencing it during Sport Education.

1 2 3 4 5 6 7 8 9 10

From 1 to 10, indicating how much you like physical education experience AFTER the season that had teams, competition, etc..

1 2 3 4 5 6 7 8 9 10

Creative Commons licensing terms

Authors will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Physical Education and Sport Science shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflict of interests, copyright violations and inappropriate or inaccurate use of any kind content related or integrated on the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).