Let Us Debate! A Proposal to Promote Social Entrepreneurship in Physical Education Teacher Education.

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Abstract

Purpose: To analyze the effects of debates on social entrepreneurship (SE) in physical education teacher education students \((n=38)\) from an urban university. Participants discussed the role that society, social class, gender, race, and violence play in sports. Method: A convergent parallel mixed-methods design with methodological triangulation was employed: QUAN+QUAL. Results: The quantitative results provide evidence regarding the positive effect of debates on SE. The qualitative analysis complements this outcome by describing how SE was developed, for example, facing a new teaching methodology, being challenged by peers and/or the teacher, analyzing different opinions and their implications, developing new arguments for discussion, discussing topics according to the students’ interests, and leading the conversation while debating. Data transformation and sentiment analyses provide supplemental information regarding the benefits provided. Discussion/Conclusion: Our results display how debates improve SE in physical education teacher education students, calling for new research in this direction.

Keywords: urban education, social effects, physical education, scale, mixed-methods.
Active learning (AL) is a teaching methodology that can enhance students’ learning by engaging them in processes of analysis, discussion, and application rather than passively receiving information (Miller & Metz, 2014). Debate is an AL method where students discuss a variety of viewpoints, taking a stance on an issue using evidence-based literature, persuasive communication, and logic to lead others to an agreement (McGee et al., 2020). Debating as a teaching strategy dates back over 2,400 years to Protagoras (481-411 BC) in Athens (Snider & Schnurer, 2006). However, there was renewed attention to debates in the 1980s through an increasing interest in promoting students’ critical thinking skills (Garrett et al., 1996). Research shows a range of productive uses of debates in a variety of fields. However, there is limited research regarding the use of debates in physical education teacher education (PETE).

Social entrepreneurship (SE) refers to “a process involving the innovative use and combination of resources to pursue opportunities to catalyze social change and/or address social needs” (p. 37) (Mair & Marti, 2006). The past decade has witnessed a surge of SE, providing important insights regarding its role in fostering inclusive growth and institutional change (Saebi et al., 2019). The enhancement of SE in teacher education is important not only to increase social skills and moral values in future teachers but also to improve global wealth, counteract social crisis, and resolve community problems. In addition, the promotion of SE in PETE would be beneficial for the whole society since PETE educators have the responsibility to train culturally conscious future teachers (Flory et al., 2014), and these teachers will be in a unique position to act as role models for future generations (Yager et al., 2020). Previous research has supported the use of AL to encourage SE in education (Siqueira et al., 2015). This suggests that debate might be an appropriate methodology to promote SE.
in PE. However, our literature search reveals a lack of studies using debates to promote SE (Thomsen et al., 2019). Likewise, new research regarding SE in PE and PETE is needed (Capella-Peris et al., 2021).

A revision of Bloom’s Taxonomy of Educational Objectives proposes that higher-order thinking skills comprise analysis, evaluation, and creation (Anderson et al., 2001). Previous research has shown that using debates enhanced these higher-order thinking skills in students (Kennedy, 2009; Mumtaz & Latif, 2017), linking the effects of debating to Bloom’s Taxonomy. In addition, debating experience induces student involvement in important social issues (Bellon, 2000), which connects debates with SE. Moreover, through debates, students can share their opinions and reflect on pedagogical, personal, and social issues, reinforcing their learning. This supports the inclusion of critical reflection processes in the training of PETE students (Coulter et al., 2020; Kjerland & Annerstedt, 2021). Altogether, we believe that using debates may be an optimal approach to achieve our desired learning outcomes in PETE by promoting Bloom’s Taxonomy higher-order thinking skills in relation to SE.

Underlying the promotion of SE through AL and debate-based strategies, this study is aligned with pedagogical currents such as critical pedagogy and meaningful PE. On the one hand, in recent times, there has been a steady growth of socially critical research exploring how PE might contribute to, and be shaped by, cultural and social forces (Fitzpatrick, 2019). This socially critical work establishes links between PE and wider social problems (Kirk, 2019). Although many approaches have focused on theoretical development, few of them have addressed active solutions and pragmatic progress (Felis-Anaya et al., 2018). Thus, our proposal aims to fill this gap. On the other hand, meaningful PE refers to the full range of human experiences that hold personal significance (Kretchmar, 2007). This approach prioritizes meaningful experiences for PE students, highlighting the idea that meaningfulness positions PE as a way of enriching the quality of young people’s lives to better suit their
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In this sense, meaningful PE has recently been identified as one area deserving of renewed attention in PE and PETE (Beni et al., 2019; Quennerstedt, 2019). Therefore, our proposal is in line with both approaches since it seeks to increase social value and enhance meaningful learning by promoting SE in PETE students.

This research aims to shed light on both issues, analyzing the impact of debate in PETE and studying the promotion of SE by using debate. Another significant contribution is made in our research design through the use of mixed-methods. This is an innovative approach in the study of SE (Hockerts, 2017) that includes the complementary strengths of both qualitative and quantitative methods (Creswell & Plano Clark, 2017).

**Materials and Methods**

**Research Settings**

This research was conducted at Morgan State University (USA), a recognized historically black university (HBCU) in Baltimore, Maryland, and was approved by its Institutional Review Board (IRB#18/02-0020). The courses included were Physical and Health Education Course (PHEC) 359 Psycho-social dimensions of sports, as the experimental group (EG); and PHEC 375 Psychology of teaching and coaching, as the control group (CG).

Following a similar approach to previous research in other fields (Darby, 2007; Jagger, 2013), the EG students worked on course contents previously developed by the teacher, applying debate as a teaching methodology. On the other hand, the PETE students from the CG completed the course by applying traditional teaching methodologies based on lectures, practice sessions, and theoretical-practical exercises. All classes were conducted by the same teacher.
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Class Activities

The most well-known debate styles are Lincoln-Douglas and Oxford (Elliott et al., 2016; Kennedy, 2007). Our teaching program was mainly based on these two debate styles. However, additional approaches such as speed round debates (Treme, 2018), pro et contra debate (Kosmatin Fras & Grigillo, 2016), and informal debates (Dy-Boarman, Nisly, et al., 2018) were also implemented. In all cases, the four characteristics of argument for a true debate were present: first, development of ideas and positions (i.e., description, explanation, and demonstration); second, clash (i.e., refuting ideas); third, extension (i.e., defending ideas against refutation); and fourth, perspective (i.e., derive essence or sum of ideas and arguments and relate it to a larger question at hand) (Snider & Schnurer, 2006).

The course was structured into five broad debates. In the following table, we display the topics and materials used to start each debate (Table 1). Additional materials, such as scientific papers, newspaper articles, and website reports, were provided during in-class discussions by the teacher and the students to enrich debates. In Table 2, we provide an example of debate in the teaching and learning context.

Design and Data Collection

A convergent parallel mixed-methods design with methodological triangulation was employed: QUAN+QUAL (Creswell & Plano Clark, 2017). The use of such designs has previously been supported in PETE (García-Fariña et al., 2021), SE research (Mehta et al., 2016), and the study of debate effects (Scannapieco, 1997). However, our implementation differs from previous studies and goes a step further since it performs data transformation, sentiment analyses, and combines three types of results in the discussion (Creswell & Plano Clark, 2017).

Quantitative evidence was gathered through a quasi-experimental design using two non-equivalent groups, an experimental group and a control group, contrasting pre-test and
post-test measures. To assess the dependent variable, the SE Competency Scale (SECS) instrument was used (Capella-Peris, Gil-Gómez, Martí-Puig, et al., 2020). This tool allows researchers to measure SE considering 17 specific features, organized in three categories.

The qualitative section was addressed using 18 reflective journals collected from all the members of the EG. The reflective journals consisted of open essays in response to the following instruction: “Please analyze and evaluate your own performance in all course debates and explain, in as much detail as possible, the reasons supporting that assessment, describing experiences in class, learning acquired from these activities, and personal opinions”. The typical length of these reflective journals was two pages of text. These reports were provided electronically and voluntarily at the end of the course, and they had no impact on their grades. Following established techniques for qualitative analysis, a double procedure (i.e., from inductive to deductive and back again) was applied to analyze the reflective journals (Flick, 2018). Reflective journals allow researchers to study educational experiences while maintaining an objective position (Pavlovich, 2007). This tool was used in previous analysis of debate implementations (Seeharaj & Samiphak, 2019), teacher training and PETE studies (Baker, 2021; Chiva-Bartoll et al., 2020), and entrepreneurship education research (Scott et al., 2019).

Finally, data transformation and sentiment analyses were used to transform the qualitative data into quantitative results (van Grootel et al., 2020). These are standard procedures of mixed-methods research where investigators take the qualitative themes or codes and count them to form quantitative measures (Creswell & Plano Clark, 2017). This numerical translation has often been used for results verification purposes, pattern recognition, and complementation with qualitative findings (Sandelowski et al., 2009).

Although data transformation may be considered controversial in some circles, this approach provides several advantages (Maxwell, 2010). In our case, while the qualitative section
assesses the importance and depth of the PETE students’ discourse, data transformation and sentiment analyses provide a complementary view of their comments by evaluating the frequency of citations and sentiment trends, respectively. Data transformation has previously been implemented in Education (Plano Clark et al., 2010) and in PETE studies (Capella-Peris, Gil-Gómez, & Chiva-Bartoll, 2020). Likewise, there are also precedents for sentiment analysis in mixed-methods research (Salvador-Garcia et al., 2020).

**Data Analysis**

For quantitative analysis, Cronbach’s Alpha test, Levene’s test, the t-test, and Pearson’s test were performed. These tests were conducted on three levels, in general, by categories, and by features of the SECS. When necessary, the effect size was calculated using Cohen’s d value, which may be interpreted as trivial ($d \leq 0.2$), small ($0.2 < d < 0.5$), medium ($0.5 < d < 0.8$), or large ($0.8 < d$) (Cohen, 1992). The IBM SPSS v.26 software package (IBM Corp., Armonk, NY) was used in this analysis.

Qualitative analysis was undertaken, analyzing the 18 reflective journals provided by the EG students. Inductive analysis was open-coding, while the deductive phase was based on the categories and features of the SECS. NVivo version 12.6 software (QSR International Pty Ltd., Doncaster, VIC, Australia) was used in this analysis.

Data transformation and sentiment analysis displayed the frequency of reflective journal excerpts, counting the number of citations related to the categories and features of the SECS as well as positive and negative sentiments. To perform data transformation, the number of times each category and feature was mentioned in reflective journals was counted. When conducting sentiment analysis, all comments were labeled and counted as either “positive” or “negative”. Those counts were used to calculate the average and the percentage of citations for each category, feature, and sentiment. When necessary, percentage scores were normalized. These analyses were conducted on three levels, globally (i.e., analyzing all
data for each category and feature), by reflective journal (i.e., assessing the records provided for each participant individually), and by sentiment (i.e., indicating the frequency of citation for positive and negative comments). NVivo version 12.6 software (QSR International Pty Ltd., Doncaster, VIC, Australia) was used in these analyses.

Hypothesis and Research Question

The specific hypothesis to be tested was *Applying debates as a teaching methodology will produce a significant improvement (p<0.05) in the SECS results for the EG compared with the CG.* Furthermore, the main question needing a response in this research is *How will debates affect PETE students’ perspectives in terms of their experience and learning related to SE?*

Participants

The study used an incidental-type non-probabilistic sample, with the sample selection matched to the class groups. In the following table, we display demographic information about the study participants (Table 3). There were no statistical differences between groups in terms of age, race, or gender.

Results

Quantitative Analysis

A value of $\alpha=0.902$ was obtained for Cronbach’s Alpha test, showing excellent internal consistency. A value of $t(58)=1.581, p>0.05$ was obtained for Levene’s test; therefore, the groups compared were considered equal. The values obtained when applying the $t$-test for paired samples were $t(29)=7.780, d=-1.437, p<0.001$ for the EG and $t(29)=-0.889, d=0.113, p=0.382$ for the CG, respectively. Hence, there was a significant difference between pre-test and post-test measures in the EG. No difference was reported for the CG. Effect sizes were large for the EG and trivial for the CG. These results were also found in the category analysis.
Additionally, the feature analysis displayed significant differences between pre-test and post-test measures for *ability to take risks* ($p<0.05$) and *ability to create ideas* ($p<0.001$) in the EG. Once again, no significant differences were reported for the CG. In the general analysis a value of $t(58)=-3.711$, $p<0.001$ was obtained for the post-test/post-test comparison. Therefore, there was a significant difference between post-test measures when comparing the EG with the CG. The category analysis revealed a significant difference for *innovative features* ($p<0.05$) and the feature analysis displayed significant differences for *initiative* ($p<0.05$) and *ability to change* ($p=0.001$) in the post-test/post-test comparison.

Finally, three significant records out of three were found for the category when applying Pearson’s test, all of which were positive and had a significance level of $p<0.05$ and a moderate degree of correlation ($0.4 \leq r_p < 0.6$). The feature analysis revealed 26 significant records out of 136, which had significance levels of $p<0.01$ for nine cases and $p<0.05$ for 17 cases. The degrees of correlation were very high ($0.8 \leq r_p < 1$) for one case, high ($0.6 \leq r_p < 0.8$) for seven cases, and moderate ($0.4 \leq r_p < 0.6$) for 18 cases.

**Qualitative Analysis**

To facilitate the comparison and combination of qualitative and quantitative data (Plano Clark, 2019), this section is organized according to the SECS features, which were used in the deductive phase. Also, we offer examples of an additional theme and positive-negative sentiments, which were identified in the inductive phase. All extracts include the informant’s reference code. The selection of these quotes is related to their importance and depth to highlight the students’ experiences in each case.

**Resilience**

Students were not used to using debates as a teaching methodology, which caused many doubts and misunderstandings at the beginning of the course: “Well I’m not going to lie, I started the semester off weak in your classes because I wasn’t used to the way you teach”
However, they were encouraged to face and solve these issues, enhancing their ability to recover from troubles: “I truly appreciated Dr. Capella-Peris encouraging me to use my voice more and speak up in the classroom. As the semester progressed, I started to speak up more in the class and give more of my opinion. I became more confident and learned quite a bit as my opinions were challenged by my classmates” (C12.Ref.1).

**Goal-oriented motivation**

Once the students got involved in the course dynamic, they applied several strategies to participate in the course, for example: “I have tried to introduce interesting topics that would be engaging amongst my class mates” (C04.Ref.2); “I believe that I went in depth on all the topics as I talked about what we discussed in class following up on what I researched on the topic” (C07.Ref.1); “I have tried to examine the topics we have discussed from a variety of angles, instead of just my own” (C12.Ref.1), etc. Altogether, this shows their interest and motivation to learn throughout the course.

**Ability to learn and evolve**

Students were forced out of their comfort zones many times while debating, which produced some uncomfortable feelings during the course: “This is the hardest class I have taken so far, and I am thankful. This class took me out of my comfort zone and forced me to receive points in an unconventional way” (C02.Ref.1). Therefore, they took advantage of this situation to develop useful competencies such as critical thinking, analytical skills, and problem solving: “The style of open discussion and debate in class allowed me to express my opinions, reaffirm believes, and adopt new ways of thinking” (C14.Ref.1).

**Confidence**

Some students felt unconfident due to being challenged by their peers and/or the teacher: “I did try to speak in class and engage. I didn’t do it as often because I noticed a lot of people would sound like they were arguing so I didn’t want to argue” (C10.Ref.1.). Nevertheless, by
the end of the semester, they were satisfied and assured regarding their progress, both academically and personally: “I have also learned to stay grounded in my beliefs, and if I feel someone is not hearing my point to not get frustrated but try to find different ways to show them so they can understand” (C08.Ref.3.).

**Social awareness**

Discussions through debates forced students to analyze different opinions and their implications: “The topics we discussed (race, gender, violence in sport) were important and affected everyone in our class. It was impossible to sit in the class and not express opinions on these important subjects” (C14.Ref.1). This enhanced the promotion of social values in students (e.g., respect, empathy, justice, honesty, etc.), displaying civic behaviors towards peers, family members, and the teacher: “I know you have come from a different place and having to adjust to our customs was very difficult, but you did well for your first year at an HBCU. I hope to stay here for many years and educate all of my African American brothers and sisters” (C15.Ref.2.).

**Commitment and coherence**

Discussing topics according to the students’ interests increased their motivation and implication during class debates: “I really enjoy this class so participating in talking about the topics we researched was not hard for me” (C11.Ref.1.). The most productive topics were ‘Race & Sport’ and ‘Gender & Sport’, which makes sense considering they were predominantly male PETE students from an HBCU institution: “My favorite one was the race topic because it allowed me to really get in touch with my culture and talk about how I felt race played an important role in sports” (C09.Ref.1.).

**Students’ appreciation-gratitude (additional theme)**

One new theme arose from the inductive phase, which included feelings of appreciation: “the experience was a great opportunity for me to showcase my academic talent and I appreciate
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the opportunity to do just that” (C02.Ref.1.); and gratitude: “you constantly said you want us
to think outside of our own mind and see and understand views from other perspectives. You
taught me how to do that and I cannot thank you enough” (C08.Ref.4.).

Positive sentiments
Many positive comments were recorded in the reflective journals. Most of them
focused on the teaching methodology employed and the learning outcomes achieved:
“Being a student in the course of PHEC 359 was quite enjoyable and helped to learn
the outcomes of this course” (C17.Ref.1); and the new points of view provided: “I
learned about how racism and sports are connected (...) Not only has racism changed
NFL, but more importantly changed my views of the NFL (...) Without your class, I
would have never thought, or even consider about looking into sports a different way
and getting deeper into sports” (C13.Ref.1).

Negative sentiments
The course dynamic also generated some critical voices. Most of these criticisms were
based on students’ own participation: “I believe that I could have done better. I could
have talked more and came up with more interesting points/topics in the beginning in
the semester” (C16.Ref.1). In addition, there were a few criticisms regarding the
interest of the topics discussed as well as the duration and management of the debates:
“There were times where I felt topics were very miscellaneous with no concrete
substance. My participation varied depending on the topic. If we discussed something
continuously several times, I felt no need to give an opinion because it was like playing
a broken record over and over. At times I felt my professor chose not to understand my
opinions, though my peers understood my statements and analogies perfectly”
(C18.Ref.1).
Data Transformation and Sentiment Analyses

This section includes the results for global analysis, comprising data for each category and feature from all participants (Figure 1), and sentiment analysis, indicating the frequency of citation for positive and negative comments from all the reflective journals (Figure 2). To limit paper extension, the results from the analysis by reflective journal are available from the corresponding author upon request.

Discussion

The mixed-methods approach offers a great opportunity to analyze the impact of debates in PETE and study the promotion of SE by using debates. When considered as parallel sources of information, the quantitative data, qualitative data, and data transformation yield results that may explain or confirm one another. Table 4 explicitly relates the three types of data to identify points of agreement. These records represent a new benchmark in SE research since no previous studies analyzing the effect of debates in the field were found. In addition, our results are consistent with several investigations that used different AL methodologies to encourage entrepreneurship education (Cooper et al., 2004; San Tan & Ng, 2006) and SE (Chang et al., 2014; Siqueira et al., 2015).

Regarding category analysis, the quantitative results revealed significant improvements in the EG and large effect sizes for all three cases (i.e., personal features, social features, and innovative features categories), while no changes were found for the CG. The category of innovative features recorded the highest $t$ value and displayed significant differences between the EG and CG in post-test measures. This indicates that innovative features reflected improvement better than the other categories, agreeing with previous research regarding the use of debates (Elliott et al., 2016; Lantis, 2004). However, the most interesting comments from the qualitative analysis were linked to social issues, suggesting a deeper influence in this category (Baum, 2018; Shreffler, 2020). On the other hand, the
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category with the highest percentage of comments on data transformation was personal features. This result underlines a greater impact of debates on personal perspective, which is in line with several previous studies in terms of the effects of debates (Jagger, 2013; Kennedy, 2009; McGee et al., 2020). These differences highlight the value of addressing the study using a mixed-methods approach so as not to miss important implications.

The feature analysis registered significant improvements for ability to take risks and ability to create ideas in the EG. This is in accordance with previous research regarding the impact of debates, reporting that students faced the fear of participating in debates (Kennedy, 2009) and opened new avenues of thinking to express their views (Oros, 2007), respectively.

Once again, no changes were reported for the CG. Besides, post-test measures for initiative and ability to change were significantly higher for the EG compared to the CG, coinciding with previous debate findings in terms of increased active and voluntary participation by students (Lantis, 2004; Ramlan et al., 2016) as well as adapting their opinions and attitudes (Kudinova & Arzhadeeva, 2020). The qualitative results highlighted the contribution of debates in terms of resilience and ability to learn and evolve. This may be a consequence of dealing with conflict and facing failure while debating (Seeharaj & Samiphak, 2019; Shreffler, 2020) and the enhancement of academic content, learning knowledge, and practical skills (Arrue et al., 2017), respectively. In addition, reflective journals described interesting experiences linked to leadership and social awareness, for example, in addition to leading in-class discussion or mentoring peers (Elliott et al., 2016; Shreffler, 2020) and by growing awareness of current events and ethical sensibility (Jagger, 2013). Finally, the features with the highest average number of comments on data transformation were confidence and commitment and coherence. This is supported by previous studies displaying more confidence (Dy-Boarman, Bryant, et al., 2018; McGee et al., 2020) as well as engagement and involvement (Baum, 2018) due to the use of debates. Records on data transformation for
goal-oriented motivation and ability to identify opportunities were also remarkably high. This agrees with previous findings of increased interest and motivation to learn (Kosmatin Fras & Grigillo, 2016; Scannapieco, 1997) and the recognition of new opportunities to work on or practice (Elliott et al., 2016; Mumtaz & Latif, 2017). Despite having a moderate impact in our research, interesting precedents regarding the use of debates were also found for creativity (Seeharaj & Samiphak, 2019), offering help and cooperation (Alén et al., 2015; Hendrickson, 2019), coexistence and respect for public affairs (Shreffler, 2020), responsibility (Darby, 2007), and belonging to well-informed social networks (Lantis, 2004). As before, these records establish a new standard for SE research.

Correlation analyses displayed numerous and significant connections between SE categories and features, suggesting they were enhanced as a whole concept rather than being fostered independently. This was supported by the qualitative data, where the relationships between features became evident. On the contrary, data transformation analysis based on the reflective journals exposed different records when comparing participants. This points to a different effect of debates among PETE students. Thus, future research might analyze how and why SE categories and specific features may be promoted differently among PETE students. Finally, sentiment analysis revealed that comments were mostly positive (77% of total count), a trend that was consistent for all categories and specific features. Apart from the learning and features developed, positive comments described the participants’ enjoyment and satisfaction. This effect of debates is widely reported in previous studies (Baum, 2018; Hendrickson, 2019). Negative experiences focused on students’ participation and interest in the topics (Alén et al., 2015), the deepness of the discussion and the students’ preparation (Wachenchauzer, 2004), and some objections regarding the format and weight of debates (Oros, 2007). As the precedents confirm, special attention should be paid to these issues in future debate implementations.
Finally, we propose the following recommendations to make PETE programs more effective in terms of SE promotion and meaningful and critical learning by using debates:

1) PETE educators should select topics according to the students’ interests as well as providing them with opportunities to see reality from different perspectives (e.g., gender, race, violence, etc.).

2) A clear social approach will be needed to increase concepts such as SE (e.g., trying to connect the topics discussed with students’ own social reality from a general perspective).

3) Particular elements of the context such as the educators’ and students’ positionalities, the specific curriculum of each PETE program, and the learners’ previous experiences should be considered when planning and implementing this teaching approach (e.g., analyzing the students’ background).

4) Several strategies can be applied to increase debate discussion (e.g., challenging students while debating by posing critical questions, analyzing different opinions and their implications, developing new arguments for discussion, etc.).

5) It is important to ensure the connection between topics, materials, and contents at all steps.

Considering these five recommendations, we encourage all PETE educators to adopt a more active position by using AL and a debate-based approach in order to promote SE as well as meaningful and critical learning.

Conclusion

In summary, debates as a teaching methodology produced an outstanding improvement in social entrepreneurship in physical education teacher education students. This conclusion is consistent with several studies regarding the implementation of debates in other fields. The results lead us to accept the $H_1$ hypothesis and provide a comprehensive
answer to the research question. These results represent new findings in the research field. As a limitation, we acknowledge that the course content (i.e., psycho-social dimensions of sports) represented an ideal match for the use of debates. Hence, these results may be more difficult to obtain in different courses (e.g., teaching sports). From a quantitative perspective, the limited sample size represents another limitation of this research. However, this was minimized by using a mixed-methods study design. Lastly, qualitative data was only collected from the EG since the qualitative research approach specifically focuses on a deeper interpretation and understanding of the phenomena experienced by participants, instead of comparing results between experimental and control groups (Flick, 2018). Therefore, to overcome these potential limitations, it is proposed that future research should be conducted to confirm the effects of debates as a teaching methodology in other courses of physical education and sport sciences, with larger sample sizes and varied research designs.

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Table 1.

**Topics, materials, and contents used to start each debate.**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Material</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Society &amp; Sport</td>
<td>What is sport and why do we study it? (Woods, 2016b)</td>
<td>Analysis of several concepts related to sports (i.e., play forms, games, sports, and work), reasons to study sports (e.g., personal development, scholarly study, and professional practice), and subdisciplines of sport science (e.g., biophysical, psycho-social, and sociocultural).</td>
</tr>
<tr>
<td>Social class &amp; Sport</td>
<td>Social class and sport (Woods, 2016a)</td>
<td>Analysis of social classes and their characteristics, importance of social, economic, and cultural elements in sports, sport access and sport barriers due to social class, comparison between amateur and professional sport, and possibilities of social mobility through sport.</td>
</tr>
<tr>
<td>Gender &amp; Sport</td>
<td>“You Go Girl!”: Twitter and Conversations about sport culture and gender (Sanderson &amp; Gramlich, 2016)</td>
<td>Analysis of discussions around gender in sport culture (e.g., women in sport, women in coaching, women’s access to male-dominated sports, etc.), after the San Antonio Spurs (NBA) hired Becky Hammon as the first full-time assistant coach in mainstream North American sport.</td>
</tr>
<tr>
<td>Race &amp; Sport</td>
<td>‘For your ears only!’ Donald Sterling and backstage racism in sport (Hylton &amp; Lawrence, 2016)</td>
<td>Contrast between frontstage–public and backstage–private racism, addressing several racialized controversies, unpacking the case of the ex-NBA franchise owner Donald Sterling as an example of how backstage racism works and how it can be resisted.</td>
</tr>
<tr>
<td>Violence &amp; Sport</td>
<td>Understanding sports violence: revisiting foundational explorations (Matthews &amp; Channon, 2017)</td>
<td>Analysis of some concepts related to violence (i.e., force and violation), contrast of several types of violence (e.g., direct, indirect, institutional, psychological, symbolic, etc.), revision of the foundational typologies of sport-related violence, and study of player violence in contemporary sociological accounts of sport.</td>
</tr>
</tbody>
</table>
**Table 2.**

*Example of a debate from the Gender & Sport topic.*

<table>
<thead>
<tr>
<th>Characteristics of argument for a true debate (Snider &amp; Schnurer, 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Development of ideas and positions</strong></td>
</tr>
<tr>
<td><strong>Clash</strong></td>
</tr>
<tr>
<td><strong>Extension</strong></td>
</tr>
<tr>
<td><strong>Perspective</strong></td>
</tr>
</tbody>
</table>

6
Table 3.

Demographic information about the study participants.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Percentage</th>
<th>Gender</th>
<th>Race</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Male - Female</td>
<td>AA - M</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>EG</td>
<td>18</td>
<td>47%</td>
<td>12 - 6</td>
<td>16 - 2</td>
<td>21.4 (± 1.4)</td>
</tr>
<tr>
<td>CG</td>
<td>20</td>
<td>53%</td>
<td>11 - 9</td>
<td>19 - 1</td>
<td>22.2 (± 1.5)</td>
</tr>
<tr>
<td>Total sample</td>
<td>38</td>
<td>100%</td>
<td>23 - 15</td>
<td>35 - 3</td>
<td>21.8 (± 1.5)</td>
</tr>
</tbody>
</table>

*AA: African American; M: Mixed race
**Table 4.**

Comparison of the three types of data results.

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantitative results (*)</th>
<th>Qualitative results (Specific features)</th>
<th>Data transformation results: A (%)</th>
<th>Integration of results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal features</td>
<td></td>
<td>Goal-oriented motivation</td>
<td>1.67 (33%)</td>
<td>Agreement (confirmation)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ability to learn and evolve</td>
<td>0.81 (16%)</td>
<td>Partial (explanation)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Confidence</td>
<td>1.78 (35%)</td>
<td>Agreement (confirmation)</td>
</tr>
<tr>
<td>Social features</td>
<td></td>
<td>Resilience</td>
<td>1.11 (14%)</td>
<td>Partial (explanation)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social awareness</td>
<td>0.56 (7%)</td>
<td>Partial (explanation)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commitment and coherence</td>
<td>1.78 (22%)</td>
<td>Agreement (confirmation)</td>
</tr>
<tr>
<td>Innovative features</td>
<td></td>
<td>-</td>
<td>4.72 (27%)</td>
<td>No match (needs more research)</td>
</tr>
<tr>
<td>New identified themes</td>
<td></td>
<td>Students’ appreciation-gratitude</td>
<td>1.11^</td>
<td></td>
</tr>
<tr>
<td>(inductive) and Sentiment analysis</td>
<td></td>
<td>Positive sentiments (deeper)</td>
<td>2.44 (77%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negative sentiments</td>
<td>0.72 (23%)</td>
<td></td>
</tr>
</tbody>
</table>

* Significant differences between pre-test and post-test measures in statistical analysis.

A: average of citations; (%): percentages of citation for a feature within a category

- No remarkable results were highlighted within this category.

^ This additional theme does not have a percentage since it was identified in the inductive phase of qualitative analysis. Therefore, there are no quantitative results to perform a comparison with these data.
Figure 1.

Global quotes of Social Entrepreneurship in the EG (n=18).

Personal features; 5.08 (A); 40%

- Goal-oriented motivation; 1.67 (A) 33%
- Confidence; 1.78 (A) 35%
- Ability to take risks; 0.67 (A) 13%
- Creativity (p); 0.17 (A) 3%
- Ability to learn and evolve (p); 0.81 (A) 16%

Innovative features; 4.72 (A); 27%

- Ability to create ideas; 1.39 (A) 18%
- Creativity (i); 0.17 (A) 29%
- Initiative; 0.83 (A) 18%
- Leadership; 0.44 (A) 22%
- Ability to change; 1.06 (A) 10.5%
- Belonging to well-informed social networks; 0.83 (A) 10.5%
- Coexistence and respect for public affairs; 0.78 (A) 7%
- Offering help and cooperation; 0.33 (A) 4%
- Responsibility; 1.22 (A) 15%
- Ability to learn and evolve (s); 0.81 (A) 14%

Social features; 7.97 (A); 33%

Category percentages were normalized given that each category has a different number of features. The size of the pie charts was scaled according to their percentage of citations.
### Positive and Negative quotes regarding Social Entrepreneurship in the EG (n=18).

#### Personal features:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Positive (%)</th>
<th>Negative (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal-oriented motivation</td>
<td>+25.6%</td>
<td>-6.0%</td>
</tr>
<tr>
<td>Confidence</td>
<td>+27.4%</td>
<td>-6.0%</td>
</tr>
<tr>
<td>Ability to learn and evolve</td>
<td>+12.4%</td>
<td>-3.4%</td>
</tr>
<tr>
<td>Ability to take risks</td>
<td>+10.3%</td>
<td>-6.0%</td>
</tr>
<tr>
<td>Creativity (p)</td>
<td>+2.6%</td>
<td>-0.3%</td>
</tr>
</tbody>
</table>

#### Social features:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Positive (%)</th>
<th>Negative (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to create ideas</td>
<td>+13.6%</td>
<td>-4.4%</td>
</tr>
<tr>
<td>Commitment and coherence</td>
<td>+17.4%</td>
<td>-4.4%</td>
</tr>
<tr>
<td>Resilience</td>
<td>+10.9%</td>
<td>-4.9%</td>
</tr>
<tr>
<td>Ability to learn and evolve</td>
<td>+7.9%</td>
<td>-2.2%</td>
</tr>
<tr>
<td>Responsibility</td>
<td>+12.0%</td>
<td>-3.3%</td>
</tr>
<tr>
<td>Offering help and cooperation</td>
<td>+3.3%</td>
<td>-0.5%</td>
</tr>
<tr>
<td>Coexistence and respect for</td>
<td>+7.6%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Social awareness</td>
<td>+5.4%</td>
<td>-1.1%</td>
</tr>
</tbody>
</table>
Total count of mentions (whole bar), with green reflecting positive comments and red reflecting negative comments, and percentages (%) are displayed for each feature and category. Category percentages were normalized, given that each category has a different number of features. Bar sizes were scaled according to their percentage of citations.