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Influence of Motivation Climate on Service-Learning Benefits among Physical Education Students

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Abstract: Service-learning (SL) emphasizes the fusion and integration of community service and academic learning, while Physical Education (PE) is oriented towards community health and well-being, aligning with Sustainable Development Goals. The study's primary objective is to discern the benefits perceived by PE students when engaged in SL courses and to test the correlation between benefits and the motivational climate they experience. Additionally, the research explores potential gender-specific variations in students' attitudes. The research was conducted with a survey on a sample of 58 students responding to a Motivational Climate in Physical Education Scale (MPCES) and the Service Learning Benefit Scale (SELEB), which assesses the motivation of students and their perceptions of SL benefits. Descriptive statistics was used to analyse the data. Pearson's correlation coefficient was used to test the relationship between the core constructs - SL benefits and student motivation, and t-tests to evaluate gender differences in SL benefits. Key findings underscore that students primarily perceived the greatest advantages from SL in the domain of knowledge application, with comparatively lower scores in general life skills. Notably, female students, on the whole, exhibited higher ratings in both SL benefits and student motivation compared to their male counterparts. Nonetheless, specific exceptions emerged in certain sub-scales, including social relatedness and ego climate within the MPCES scale, as well as critical thinking within the SELEB scale. According to the results, it is suggested that cultivating a student-centered learning environment can augment engagement and motivation in the realm of physical education (PE). Furthermore, the delineated gender differences offer valuable insights for educators, highlighting the need for tailored approaches to accommodate the diverse preferences and requirements of male and female students.

Keywords: Academic learning, gender differences, motivation, physical education, service-learning benefits.

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Introduction

As highlighted by Bringle and Hatcher (1996), many faculty staff, and students, particularly those at urban campuses, are involved in their communities (for example, neighborhood development, community agencies, churches, youth work) independent of the university. When we analyze the campus environment, higher education encompasses both curricular and extracurricular activities that bear social significance. Within the campus environment, a noteworthy proportion of faculty students actively engage in extracurricular community service, participating through student organizations, the initiatives of student service offices, and campus-affiliated organizations. On the other hand, there is a smaller number of curricular activities that bear social significance in a structural way through a syllabus. The pedagogical tool with which it is possible to introduce socially oriented activities into formal education through specific syllabuses and academic programs is called Service-Learning (SL). SL is a well-known, modern pedagogical tool that has its own path in the degree of application to the world. The reason for this is primarily the benefits that all involved stakeholders gain by using this tool: students, teachers, representatives of society and higher education institutions as well. Furthermore, its effectiveness hinges on its simplicity and user-friendliness, as emphasized by Prentice and Garcia (2000). Learning emerges through service activities, where both service providers and recipients gain valuable insights from their experiences. According to Madsen and Turnbull (2006), it was highlighted that academic SL represents a multi-faceted pedagogical approach, closely tied to experiential learning. It becomes an integral part of a credit-bearing course, manifested as a well-structured, purposeful, and meaningful project. The core essence of SL is shaped by its experimental nature. As described by Prentice and Garcia (2000), SL can be regarded as a type of experiential education, it intertwines the realms of occupational and/or academic learning with a commitment to community service. Bringle et al. (2006) provided a definition of SL as an approach in the field of education that bridges the gap between theory and practice. It

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enables students to engage in community service that addresses local needs and encourages them to reflect on their experiences in a classroom setting. This reflective process aims to deepen their comprehension of the course material and foster a heightened sense of civic engagement. The percentage of use of SL in higher education has been growing throughout history, making it important to distinguish between SL and Volunteering and SL and Internship. SL primarily aims to enrich students' comprehension of theoretical knowledge through community service experiences and reflective practices. Conversely, internships place a higher emphasis on the acquisition of specific skills, important for the careers, with the service provider being the primary beneficiary (as noted by Salam et al., 2019). According to Bringle et al. (2006), what sets SL apart from other forms of experiential learning, such as internships, etc., is its inherent connection to an academic discipline rather than the sole focus on developing career-specific skills. Cervantes and Meaney (2013) underscored a fundamental distinction based on the primary beneficiaries of these experiences. Volunteerism and also community service primarily benefit the community members and the community agencies, while student participation in field experiences and internships primarily serves to enhance students' learning. Anderson et al. (2001) identified six key components that typically underpin SL programs: (a) High-quality service to the Community: Ensuring that the service provided meets the needs of the community effectively, (b) Integrated learning: Establishing a strong connection between the service activity and classroom instruction to facilitate holistic learning, (c) Reflection: Encouraging students to reflect on their experiences related to the service and to integrate them with their academic learning, (d) Student voice: Empowering students to have a significant role in planning and implementing learning activities, (e) Collaboration: Fostering partnerships and collaboration to ensure benefits for all parties involved, including students, the community, and the university, (f) Evaluation: Employing assessment mechanisms to effectively gauge progress toward both the learning and service-related goals of the program. Central to the success of SL is motivation. However, as noted by Lo et al. (2019), there has been a notable scarcity of efforts employing the expectancy-value theory to comprehensively examine the learning journey and to understand how various factors influence students' motivation and their eventual learning achievements, particularly within the context of SL. Motivation in sports is very important for achieving success, as well as in activities that help solve society's problems. In both cases, motivation is what is crucial for the directed activity to be done. Therefore, in this research, an attempt was made to analyze whether there is a correlation between these two concepts in students studying PE. The link between these two concepts, among others, was also investigated later on by Lo et al. (2022) examining 2056 students enrolled at the University of Hong Kong. They confirmed the key role of learning experiences and motivation in shaping cognitive learning outcomes and the impact on academic SL. Their research has shown how complicated student learning behavior can be and the complex influence of factors in the context of SL. The research contributed valuable insights into how motivation and learning experiences contribute to students' cognitive learning outcomes during their participation in academic SL.

Students' motivation to engage in SL activities often stems from the opportunity to gain insights into their values and goals through active participation, as highlighted by Duffy and Raque-Bogdan (2010). Through this experiential tool, students effectively embark on a journey of self-discovery.

Conversely, external motivational factors also play a significant role. The importance of external motivation could be pointed out in accordance with Chesbrough's (2011) observations and various external reasons for inclusion in SL activities, such as an improved resume. However, over time, these motivations tend to shift towards more intrinsic and internally driven sources. As outlined by Pintrich and Schunk (2002), motivational theories aim to address fundamental questions related to what stimulates individuals into action (the process of energization) and what specific activities or tasks they are inclined to pursue. Many different authors pointed out that the main leading component of the motivation definition is to answer what individuals want and whether there is a basic need.

In the realm of student motivation in study programs oriented to physical education (PE), two foundational social cognitive theories come to the forefront: Achievement Goal Theory (AGT) and Self Determination Theory (SDT). In the context of AGT, the concept of 'motivational climate' has been embraced to encompass the examination of environmental factors that shape how individuals perceive their competence and pursue distinct goals (as observed by Braithwaite et al., 2011). Specifically, two primary aspects of motivational climate have been identified: Ego-involving climate - this climate revolves around performance comparisons among students, often leading to heightened external motivation, increased anxiety, and diminished interest in the activity (Duda & Whitehead, 1998). Task-involving climate - in contrast, this climate fosters student performance and personal growth. Students are encouraged to put forth effort, and they have the autonomy to set their own personal goals (Ames, 1992).

Competence, as well as relatedness and autonomy, are the pillars of students' well-being, according to the SDT theory. The environment that will contribute to meeting the needs of students in autonomy, competence, and relatedness is the one that promotes the feeling of satisfaction of students. On the contrary, an environment that limits and restricts student achievements in the need for autonomy, competence, and relatedness will negatively affect the overall feeling of satisfaction. As highlighted by Pintrich (2003), the importance of three fundamental psychological needs is emphasized: Competence refers to the innate desire to excel and become proficient in navigating and interacting effectively with one's environment.

Autonomy: This need signifies the craving for control and the yearning to experience autonomy and self-determination in one's actions and decisions. Relatedness: This need encompasses the longing to connect, belong, and establish

emotional attachments within a social or group context. Prior research underscores the significance of the environment in fulfilling these three student needs within PE classes. It serves as a crucial catalyst for nurturing intrinsic motivation within the educational context (referencing Hagger & Chatzisarantis, 2008; Ntoumanis, 2002). Successful PE lessons are directly connected to the development of the best possible pedagogical working environment and a positive motivational climate. Therefore, the possibility of assessing the positive motivational climate, as well as its influence on individual activities within PE lessons, is of exceptional importance for successful education and acquisition of skills. In their study, Soini et al. (2014) validated Motivational Climate in Physical Education Scale (MPCES) and assessed the factorial validity and internal consistency of the MPCES using a sample of 4397 students, encompassing both genders aged 14 to 15 years. In constructing the MPCES scale, the authors incorporated four dimensions, which encompassed aspects of social relatedness, perceived autonomy, and both task- and ego-involving climates, drawing from the work of Liukkonen et al. (2010) and Standage et al. (2003). It is also important to mention the motivation of the teachers for the implementation of the SL activities. They are motivated to implement this tool because it brings many benefits to them. For example, it helps them to modernize the classes, connect with the external environment, they get the field data for their research, they become more aware of the theoretical implications, they create a great atmosphere in the classes, etc.

Today, when societies strive to apply the UN's Sustainable Development Goals, SL can be linked to several sustainable development goals. The Sustainable Development Goals (SDGs) represent an urgent and collective imperative for all nations, both developed and developing, to collaborate in a global alliance. These goals acknowledge the interdependence of eradicating poverty and addressing disparities, while concurrently enhancing health, education, and economic progress. Simultaneously, they encompass efforts to combat climate change, safeguard our oceans and forests, and promote a sustainable future (United Nations, 2023). Established in 2015 by the United Nations General Assembly (UNGA), they were a very important component of the Post-2015 Development Agenda. This agenda aimed to formulate "a new global development framework to follow the "millennium development goals" (as discussed by Biermann et al., 2017).

Moreover, by using the SL, the implications for society can also be great (United Nations, 2023). There are more SDGs that can be connected with the SL, for example, Goal number 4, which refers to quality education, or goal number 11, sustainable cities and communities. The SDG goals present "the collection of seventeen interlinked objectives designed to serve as a shared blueprint for peace and prosperity for people and the planet, now and into the future".

The connection between SL and PE is intricately tied to the concept of motivation. Therefore, this research aimed to delve into how students in the field of PE perceive the advantages of engaging in SL. Given that the successful implementation of SL hinges on students' motivation to participate, it was particularly intriguing to investigate the impact of the motivational climate on the benefits derived from SL. Furthermore, since motivation plays a pivotal role in the academic journey of PE students, conducting this research within this specific population was deemed essential.

The impetus for this research was further fueled by the observations made by Salam et al. (2019), which indicated that in certain academic disciplines, such as arts, mathematics, natural sciences, sports, engineering, hospitality, and tourism, the incorporation of SL is still in its initial stages. Conversely, according to Carson and Raguse (2014), there has been a noticeable surge in community-based SL efforts in recent years within fields like health, PE, and also in the field of recreation, dance, and sport disciplines.

From their perspective, the growing popularity of youth-centered SL in PE and sport can be attributed to several factors. These include the common prevalence of active play and youth sports programs, the emphasis on youth development within the field, and the steady expansion of physical activity initiatives for underserved youth. Carson and Raguse highlighted that examples of SL initiatives can be found in nearly every sub-discipline of PE and sport, underscoring the widespread applicability and relevance of this approach.

Previous research, as noted by Brouse et al. (2010), has indicated the presence of gender-specific distinctions in motivation for engaging in SL experiences. Chesbrough (2011) similarly identified differences, highlighting that male students often exhibit reluctance to participate in service opportunities due to factors such as limited awareness, lack of interest, concerns about time commitments, and not receiving invitations to partake. In contrast, female students tend to view participation in service activities more as an opportunity for personal development rather than a duty. Participation in the service activities is seen by male students as their duty and by female students more as an opportunity to develop.

In the realm of education, the conceptual framework of SL in PE was effectively put into action (Figure 1). This model embodies a paradigm shift from traditional to contemporary educational approaches within the domain of Physical Activity and Sports.

Methodology

Research Design

The main objective and purpose of this research was to identify the benefits that PE students perceive from participating in an SL course. The first goal was to determine if the increase in motivation climate leads to an increase in the perception of the SL benefits. The correlation was used to test the connection between the benefits of SL and motivational climate. Another goal was to test the differences that might exist in terms of gender differences with motivation and SL benefits.

Students studying PE engage in both theoretical and practical learning through conventional methods. They then channel this knowledge to construct projects that pertain to PE content development. PE students have many opportunities to participate in the SL projects. Some examples of good practice can be humanitarian sports races for Non-Government Organizations in need, developing training programs to prevent health issues of school kids, or developing and organizing two-times per week training for people who are 65+ years old, etc. The primary objective of these projects is to apply the acquired theoretical understanding to real-world contexts, refining it to address the actual societal demands of our community. Simultaneously, this process encourages students to critically evaluate their academic learning and foster innovative and creative perspectives within their profession.

Following their preferences and areas of interest, students are guided towards specific social issues. By embarking on projects related to Physical Activity and Sports, they actively contribute to the resolution of particular societal challenges, while also cultivating a deep reflective understanding of the underlying causes of these problems. This reflective process, subsequent to project realization, empowers students to leverage their practical knowledge and experiences in influencing the evolution of the academic curriculum. As a result, the curriculum becomes dynamically aligned with the prevailing social requisites. The conventional teacher-centered approach in the realm of Physical Activity and Sports education is thus revolutionized into a contemporary student-centered model. Under this approach, students transcend the mere fulfillment of assigned obligations. Instead, they undertake the roles of creators and critical thinkers, attuned to the genuine needs of society. Through hands-on application of academic insights in the domain of PE and Sports, they seamlessly intertwine their learning with the tangible needs of the community. According to all above-mentioned, a conceptual framework model has been developed (Figure 1).

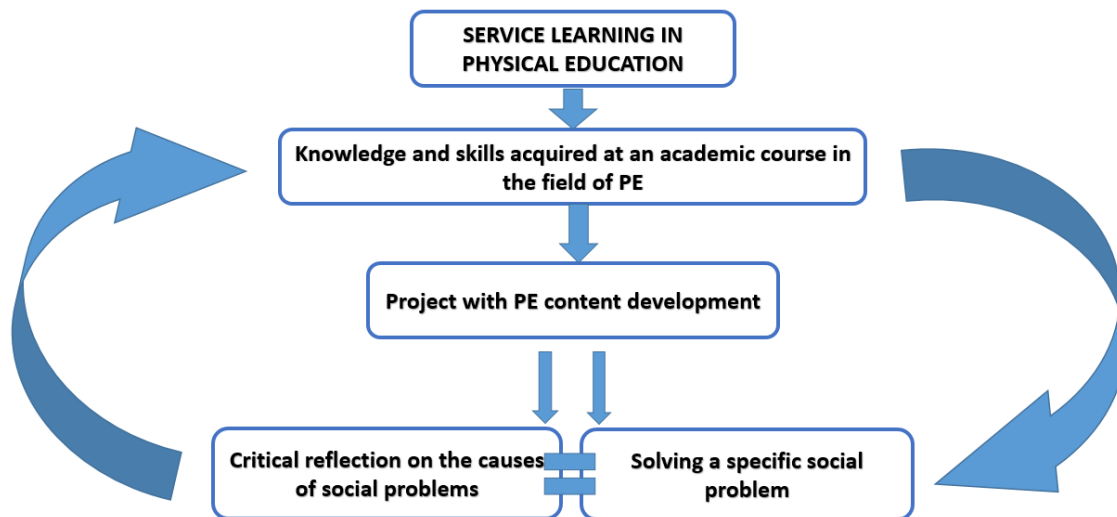


Figure 1. The Conceptual Framework of SL in PE

The main instruments that the authors used are MPCES and Service Learning Benefit Scale (SELEB). The MPCES questionnaire, as utilized in a study conducted by Soini et al. (2014), underwent a refinement process. In this validation study, the questionnaire's initial 45 scales were condensed to a more concise set of 18 scales. These 18 scales were subsequently grouped into four distinct factors: autonomy, social relatedness, task involving climate, and ego involving climate.

As outlined by Soini et al. (2014), the theoretical components characterizing the dimensions of motivation climate are as follows: Task-involving climate: This dimension centers on encouraging students to give their best effort, viewing mistakes as part of the learning process, exploring new skills, and making progress in their personal abilities. Ego-involving climate: Within this dimension, the focus shifts to competition relative to others, comparing oneself to peers, striving for superiority over others, placing importance on outperforming others, and engaging in normative comparisons. Autonomy: Autonomy emphasizes supporting students' freedom to make choices, providing opportunities for decision-making, enabling them to influence the conduct of PE lessons, and allowing them a say in matters relevant to the class.

Social relatedness: The social relatedness dimension underscores the importance of teamwork, fostering cohesion during classes, promoting collaboration, and cultivating a sense of unity within the class during PE activities.

The set of five items pertaining to the Autonomy dimension offers students the opportunity to select from various activities during a PE lesson. These items also enable an assessment of the extent to which PE fosters students' independence, grants them the freedom to make choices, and empowers them to influence the structure of a lesson, as discussed by Topatsi et al. (2022). The five items from the task-involvement dimension represent effort and self-improvement and examine the participants' effort for personal improvement and the perception that mistakes are part

of the learning process. The four items from the Ego-involvement items dimension represent normative comparison and examine the presence of a competitive climate in the lessons and the sense of superiority over classmates. The four items from the social relatedness dimension represent the students' unity in PE classes and explore the development of team spirit, unity, and collaboration between the students to resolve difficult situations during a lesson. Each item was rated on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (totally agree). The MPCES scale was used in the research because it has been validated multiple times in the context of measuring key categories that determine motivation in the field of PE students.

The SELEB scale, originally developed by Toncar et al. (2006), comprises six distinct dimensions organized across 27 items: 1 – civil responsibility, 2 – interpersonal skills, 3 – leadership possibility, 4 – ability to apply the acquired knowledge, 5 – general life skills, and 6 – critical thinking. Civic Responsibility: this dimension encompasses aspects related to social responsibility and citizenship skills, community involvement, service to people in need, and the ability to make a difference in the community. Interpersonal Skills: in this dimension, various interpersonal skills are examined, including communication skills, understanding cultural and racial differences, social self-confidence, developing caring relationships, and empathy and sensitivity to the plight of others. Leadership Possibility: this dimension delves into factors such as the ability to work well with others, leadership skills, being trusted by others, and backgrounds. Ability to apply acquired knowledge: this dimension explores the practical application of knowledge, including applying knowledge to the "real world," social action skills, and connecting theory and practice. General Life Skills: this dimension considers a wide range of life skills, including spiritual growth, personal growth, professional relationships with faculty, conflict resolution, ability to assume personal responsibility, development of workplace skills (e.g., punctuality, taking direction), having a stronger voice in the classroom, organizational skills, and bolstering one's resume. Critical Thinking: in this dimension, aspects related to problem analysis and critical thinking are assessed. This scale was used because it brings a unique overview of all the key benefits that students can identify from SL activities. As stated by Toncar et al. (2006), it was created as a result of a carefully developed scale that summarizes the most important benefits of SL.

The Likert scale from 1-7 was used to rate the students' responses (1= extremely unimportant, 2= not important, 3= neither important nor unimportant, 4= important, 5= extremely important).

Students were given basic information and instructions regarding: (a) basic information on the study and the study objectives, (b) basic information on the questionnaire being conducted and the way to fill out the questionnaire, as well as anonymity in the interpretation of results. The students were advised to ask for assistance in filling out the questionnaire in case they needed it. Students' involvement in SL activities in the study was voluntary and participants were informed that they could withdraw at any time. No problems were reported whatsoever during the study and no assistance was requested while filling out the questionnaire.

Sample and Data Collection

The research as a pilot was conducted on a sample of 58 students of PE aged between 20 and 22 (28 male students and 30 female students). MPCES motivation scale and the SELEB scale were used to measure student motivation and perception of SL benefits. Descriptive statistics was used to summarize and describe the data collected from the survey as the first step of the data processing. Pearson's correlation coefficient was applied to examine the relationship between the two main constructs, SL benefits, and student motivation. A T-test was used to explore differences between the responses of male and female students.

Building upon earlier research by Burns (2011), a well-established link exists between the motivation to volunteer and engagement in SL. Furthermore, a significant connection has been established between expectations, motivation, and active participation in curriculum-integrated SL initiatives, as evidenced by a survey conducted among public relations students (Muturi et al., 2013). Given the paramount significance of motivation within the context of PE students, the initial hypothesis formulated for this research is as follows:

H1: There is a significant correlation between motivation climate and SL benefits subscales for PE students.

Previous research also points out the difference in the academic motivation of male and female students for studying in general. For example, Kuśnierz et al. (2020) conducted research in Poland and Ukraine and concluded that women – female PE students are more motivated regarding academic achievements than men. Also, a significant difference regarding the type of male and female involvement in the community, together with the significant gender differences in motivation for participating was shown in the research made by Raykov and Taylor (2014).

H2: There is a significant difference in the perception of the SL benefits that are gender conditioned.

H3: There is a significant difference in the motivation climate that is gender conditioned.

Analyzing of Data

All data were collected using a questionnaire. The results were processed with the SPSS program (SPSS Windows 22). For the purpose of data analysis, first, descriptive statistics was used. After that, for the purpose of testing the set

hypotheses, a correlation was made using Pearson's coefficient. The measurements fit all assumptions, such as the normality of analyzing techniques.

Findings / Results

Firstly, descriptive statistics were done with the SL benefits (Table 1). According to the results, the highest mean was related to the knowledge application as a benefit of SL activities. The lowest score was detected in the category of General Life Skills as an identified benefit of the SL.

Table 1. Descriptive Statistics of the SELEB Subscales

| N=58 | Min | Max | Mean | SD | Skewness | Kurtosis |
|-----------------------|------|------|------|------|----------|----------|
| Critical Thinking | 3.00 | 7.00 | 5.67 | 1.13 | -0.60 | -0.23 |
| Civil Responsibility | 3.00 | 7.00 | 5.63 | 0.76 | -0.77 | 1.34 |
| Interpersonal Skills | 2.40 | 7.00 | 5.69 | 0.91 | -0.97 | 1.57 |
| Leadership Ability | 3.25 | 7.00 | 5.70 | 0.79 | -0.70 | 0.57 |
| Knowledge Application | 3.33 | 7.00 | 5.96 | 0.84 | -1.21 | 1.29 |
| General Life Skills | 3.00 | 6.30 | 4.92 | 0.74 | -0.65 | 0.24 |
| SELEB Total | 3.74 | 7.00 | 5.65 | 0.69 | -0.59 | 0.14 |

Both selected scales were tested and their validity and reliability were confirmed (Soini et al., 2014; Toncar et al., 2006) through previous research. For analysing the reliability and the internal consistency of the MPCES subscales, Cronbach's alpha was calculated. The Cronbach's alpha coefficients for the four subscales were all above .70 and ranged from .72 (Autonomy) to .81 (Social relatedness). An additional step that was done was testing the SELEB scale Cronbach's alpha. The results showed that there is internal consistency of the SELEB subscales in the range of .76 (General Life Skills) to .98 (Interpersonal Skills).

The following step was to analyse if there is a statistically significant correlation between all the subscales of the MPCES motivation scale and an SL benefits SELEB (testing of Hypothesis H1). For that purpose, the Pearson's coefficient was used and the results have shown a statistically significant correlation between subscale interpersonal skills with social relatedness and autonomy. Also, a statistically significant correlation was shown in subscales of leadership ability with social relatedness and autonomy and knowledge application and autonomy (Table 2). In cases where a negative correlation was recorded (Table 2), it can be concluded that the increase in one scale leads to a decrease in the value of another scale. However, it is important to emphasize that none of the negative correlations were marked as statistically significant.

Table 2. Correlations Between MPCES and SELEB Scale

| SELEB / MPCES scale | Task Climate | Social Relatedness | Autonomy | Ego Climate | MPCES Total |
|-----------------------|--------------|--------------------|----------|-------------|-------------|
| Critical Thinking | -.39 | .15 | .17 | -.39 | -.08 |
| Civil Responsibility | -.35 | .05 | .23 | -.12 | -.05 |
| Interpersonal Skills | -1.22 | .41** | .36** | -.19 | .15 |
| Leadership Ability | .03 | .30* | .35** | 1.65 | .18 |
| Knowledge Application | .01 | .14 | .28* | -.20 | .08 |
| General Life Skills | .07 | .22 | .18 | -1.29 | .07 |
| SELEB Total | -.11 | .28* | .03* | -.19 | .09 |

*. Correlation is significant at the .05 level (2-tailed).

**. Correlation is significant at the .01 level (2-tailed).

According to the results, the first hypothesis can partially be accepted because of a positive correlation between Motivation Climate and SL benefits subscales for PE students.

An additional step was made to compare the means in terms of gender differences (testing of Hypothesis H2 and H3). For this purpose, the t-test was made and the results showed a slight difference in the responses. The initial step was made to test the responses of the male and female students regarding the SELEB scale. According to the results, female students had a higher mean on the scale of civil responsibility, interpersonal skills, leadership possibility, knowledge application, and general life skills. The only subscale where male students had a higher mean is critical thinking (Hypothesis 2). Results of the t-test show significant differences between genders in sub-scale Interpersonal Skills in favour of female students, therefore, the second hypothesis can be accepted.

According to the results presented in Table 3, male students registered a higher mean than female students in subscales of the task climate and ego climate. Social relatedness and Autonomy of the MPCES subscales are higher rated by female students, together with the entire MPCES scale (Hypothesis number 3). t-test shows differences between genders in the MPCES and SELEB scale, but as we can see from the *p*-value, they are not statistically significant.

Table 3. Gender Differences in MPCES and SELEB Subscales

| | Male n=28 | Female n=30 | Total n=58 | Sig. (2-tailed) |
|--|--------------|----------------|---------------|-----------------|
| MPCES scale and subscales (mean±SD) | | | | |
| Task Climate | 2.8±0.5 | 2.6±0.8 | 2.7±0.7 | .27 |
| Social Relatedness | 3.9±0.7 | 4.0±0.8 | 3.9±0.7 | .71 |
| Autonomy | 4.1±0.5 | 4.4±0.5 | 4.3±0.5 | .01 |
| Ego Climate | 2.5±0.7 | 2.4±0.8 | 2.5±0.8 | .49 |
| MPCES Total | 3.4±0.4 | 3.4±0.5 | 3.4±0.4 | .82 |
| SELEB scale and subscales (mean±SD) | | | | |
| Critical Thinking | 5.7±1.2 | 5.7±1.0 | 5.7±1.0 | .97 |
| Civil Responsibility | 5.5±0.8 | 5.8±0.7 | 5.6±0.8 | .19 |
| Interpersonal Skills | 5.5±1.0 | 5.9±0.8 | 5.7±0.9 | .15 |
| Leadership Possibility | 5.6±0.9 | 5.8±0.7 | 5.7±0.8 | .55 |
| Knowledge Application | 5.9±0.7 | 6.0±0.9 | 5.9±0.8 | .67 |
| General Life Skills | 4.9±0.8 | 4.9±0.7 | 4.9±0.7 | .72 |
| SELEB Total | 5.6±0.8 | 5.7±0.6 | 5.7±0.7 | .36 |

*t-test significant differences

Discussion

Since motivation is important in the implementation of SL, the authors decided to test the influence of the motivational climate and its correlation with the SL benefits. According to the results, the highest benefit identified in this research was knowledge application, and that is something that should be specifically emphasised during communicating and promoting participation in SL. Also, there is a statistically significant correlation between the specific subscales of the MPCES and SELEB scales. It is especially registered between specific scales of Social Relatedness and Interpersonal Skills. The research can also be connected with the previous research made by Vansteenkiste et al. (2004) who pointed out that in an environment where the student-centered way of learning or autonomy is implemented, students are more satisfied. In this case, it was confirmed that where the higher level of autonomy is applied, students perceive a higher level of interpersonal skills, leadership ability, and knowledge application as SL benefits. Finally, female students provided higher ratings of SL benefits in all categories except critical thinking. In MPCES subscales, the main scale and all subscales were higher rated by female students except the sub-scale of ego climate and social relatedness. According to the research results, the first hypothesis can be confirmed, and the other two can be confirmed partially. It is also important to emphasize, when observing gender differences (Hypothesis number 2 and 3), that this research relies on other previous research, since the paper explores gender differences in SL benefits, finding that female students rated SL benefits higher in all categories except critical thinking. It is important to emphasize that the difference exists, but it is not statistically significant. Prior research indicated that female students are more likely to engage in SL activities in higher education (Chesler & Vasques Scalera, 2000; Stukas et al., 1999), so it can be concluded that this hypothesis needs to be more explored. Miller (1994) also described a big difference between the notion of SL which was conditioned by gender, where female students were significantly more strongly involved in SL programs as necessary for the development of society in which they preferred to be involved. Depending on the results of his work, he suggested in further research that in SL programs, female students focus more on the motive of the institution in the project, and female students more on procedural justice, and thus the differences can perhaps be used effectively. Although effect sizes should be calculated to quantify the magnitude of gender differences found and relying just on statistical significance is insufficient, this is considered as the first initial step in revealing differences that are gender conditioned.

A similar difference is observed in the motivation as well, which is in line with the previous research (Kuśnierz et al., 2020). As stated by Chiva-Bartoll and Fernández-Rio (2022), SL possesses the essential components to qualify as an activist, transformative, cross-disciplinary, and context-spanning pedagogical model in PE. SL is becoming more recognized as a competitive advantage among other universities and it can be used as a tool of differentiation. It is easy to use and it brings many benefits to different internal and external stakeholders included. Its implications on the PE sector are very visible and it is considered to be a highly appreciated tool to motivate students and teachers. Lo et al. (2019), emphasize that the application of motivation theories in learning has been much discussed in the past decades, including experiential learning and SL (Li et al., 2016). Many different studies during the past decades that analysed different aspects of SL and the benefits it brings to students. Previous research was also done in the PE field (Chiva-Bartoll et al., 2019; Pérez-Ordás et al., 2021). In those studies, authors pointed out the application of learning as one of the most important benefits that SL brings (Eyler & Giles, 1999), as it was confirmed in this research as well. Life skills are something that previous authors excluded as an important benefit (Astin & Sax, 1998), but this research showed the minimum mean for PE students. The reason for such a difference could be in the size of the sample since the sample Astin and Sax analysed was significantly larger (3.450 students) than the sample used in this research.

According to previous studies, student-centered autonomy in the teaching process, as one of three dimensions of social environment, affects the improvement of intrinsic motivation due to the ability of students to choose certain contents and methods in the teaching process, and to make decisions themselves (Black & Deci, 2000). In a teaching environment in which student-centered, autonomy is implemented, students are more satisfied and active during the teaching process (Vansteenkiste et al., 2004).

Therefore, the connection of SL based on student-centered pedagogy is expected, with factors of the motivational climate, especially the social relatedness and autonomy subscale. At the same time, the greatest correlation is noted in the interpersonal skills and leadership ability subscales, and knowledge application, which were significantly related to the Autonomy subscale. Student-centeredness strives to develop critical thinking and problem-solving instructions among active students in which they expand their skills and understanding which is consistent with interpersonal skills and leadership ability.

Motivation is something that detects the SL activity, firstly because of this new way of teaching – a student-centered approach, shaping the students as future change-makers, ready to cooperate in this transversal society. Students from different faculties and universities socialize during collaborative work, which promotes interdisciplinary and transdisciplinary, assure interdisciplinary collaborative approaches and develops problem-based learning, a hands-on approach as a modern HE tool. The benefits for all included stakeholders are very tangible. As a recommendation for further research, it would be good to extend the target groups of stakeholders when testing the perceived benefits of SL from students to the target group of teachers, external NGO representatives, etc. According to some previous studies, the motivation of the teachers is crucial in SL implementation success (Darby & Newman, 2014), so we found it necessary to do additional research about the framework for understanding faculty members' motivation to continue to implement teaching academic SL courses. Participation in SL activities brings many benefits for them, but if they want to use it – they have to engage differently and more actively because they act as moderators in the process between students and association representatives. During this process, they constantly have to bear in mind that students are supposed to achieve learning outcomes during the SL activities. The question that arises is whether the teachers are also motivated for the SL activities. That brings us to the recommendation for further research: firstly, additional research could be conducted with PE teachers and secondly with students from other fields of study to see whether there are differences compared to the results of this research. The study's findings spotlight the tangible benefits of SL in PE. Educators, policymakers, and researchers can glean valuable insights to enhance educational approaches and curricula. The correlations identified between motivation climate and SL benefits signal the power of cultivating a student-centered environment, particularly for promoting engagement and motivation within PE. The gender differences illuminated through the research provide practical guidance for educators seeking to tailor their methods to accommodate the diverse preferences and needs of both male and female students. The significance of SELEB was affirmed through this study as a mechanism capable of aiding higher education establishments in appraising students' viewpoints regarding SL activities within their courses. It enables an assessment of the efficacy of SL initiatives from the students' perspective, along with an evaluation of the degree to which these activities align with the course's learning objectives. Conversely, nonprofit organization managers can also derive advantages by gaining insights into the experiences perceived as most advantageous by students. This knowledge can be leveraged to collaborate with faculty in designing SL experiences that furnish students with these advantageous outcomes (Toncar et al., 2006).

This research refers to prior research highlighting the importance of student-centered autonomy in education, especially in relation to motivation and engagement. This background underscores the study's focus on how the student-centered approach of SL could align with aspects of motivation climate, particularly Social Relatedness and Autonomy. The research also suggests that the observed strong correlations, particularly in Interpersonal Skills, Leadership Ability, and Knowledge Application, indicate that student-centeredness in education can foster critical thinking and problem-solving skills, which correspond with these skills' development. This partially goes in line with the factors that Eyler and Giles (1999) pointed out, as one of the most important benefits that arise from SL. From their research, knowledge application was identified as one of the strongest factors, together with increased personal development, social responsibility, interpersonal skills, tolerance, and learning).

The results of the study shed light on the perceived benefits of SL in PE. These findings are valuable for educators, policymakers, and researchers aiming to improve educational approaches and curricula. The correlations found between motivation climate and SL benefits suggest that fostering a student-centered environment can enhance engagement and motivation in the context of PE. Additionally, the gender differences identified could guide educators in tailoring approaches to meet the diverse needs and preferences of male and female students.

Conclusion

According to the results obtained in this study, the subscales of the MPCES questionnaire, social relatedness, and Autonomy factor have significant roles in the SL implementation in higher education PE programs. Generally, a learning environment where PE students can independently and, based on their own free choice, participate in the planning and organizing of PE classes, as well as explore the team possibilities and mutual collaboration, can contribute to SL quality.

In that way students are more involved in resolving difficult situations during lessons, developing students' inclusiveness, independence, and critical thinking. However, further research on PE students is needed to confirm these findings.

Based on all the above mentioned, it can be confirmed that the SL can be used to differentiate the university from the traditional approach. It is a tool developed on the grounds of motivation, where social relatedness and autonomy correlate with interpersonal skills, leadership ability, and knowledge application. It can also be used as a model of good practice in other sectors. Overall, this research contributes to the growing body of evidence supporting the efficacy of SL in PE. It not only validates SL's transformative potential and alignment with motivational principles but also provides a nuanced understanding of its impact on student engagement, skills development, and gender-specific perceptions. As education evolves, the study's insights can catalyze meaningful improvements in pedagogical strategies and create enriching experiences for both educators and learners in the realm of PE.

Recommendations

In conclusion, this research offers a comprehensive understanding of the benefits, motivations, and gender-specific aspects of SL in PE. By implementing the above recommendations, institutions can capitalize on the transformative potential of SL, foster student engagement, and contribute to the evolution of innovative and student-centered pedagogical practices. As education continues to evolve, these insights can pave the way for enriching and impactful learning experiences in diverse academic settings. Some specific recommendations could be to emphasize the knowledge application benefit, given that knowledge application emerged as the highest perceived benefit among participants, it's recommended that educators and institutions highlight this aspect when promoting and communicating the value of participation in SL activities. Further on, this study reveals significant correlations between specific subscales of the MPCES and the SELEB scale, particularly in the areas of Social Relatedness and Autonomy. Educators and institutions can leverage these correlations by incorporating student-centered strategies that foster social interactions and autonomy within SL initiatives, enhancing overall engagement and perceived benefits. The study suggests that SL promotes interdisciplinary collaboration and problem-based learning. Institutions can capitalize on this aspect by encouraging collaborative projects that involve students from various faculties and fields of study. This approach not only enhances learning but also prepares students for the complexities of a transversal society.

The study identified basic gender differences in the perception of SL benefits. Researchers should explore this difference more and educators should consider tailoring their approaches to address these differences. This could involve creating environments that resonate with the motivations and preferences of both male and female students, thereby enhancing their engagement and overall experience. The study underscores the broader applicability of SL beyond PE. Institutions can position SL as a model of good practice across various educational sectors, advocating for its integration as a transformative pedagogical approach that aligns with contemporary educational paradigms. This research aligns with the guidance offered by Cervantes and Meaney (2013), who advocated that the ultimate objective should revolve around establishing a comprehensive body of knowledge rooted in theory and scientific evidence. This knowledge base would serve as a foundation for crafting, executing, and evaluating SL curricula within the realm of PE Teacher Education (PETE), with an emphasis on identifying and promoting best practices. This research represents experience from one PE faculty that can help to identify the benefits of SL for PE students, as well as the link between SL and motivation climate. It presents a roadmap for the development of future research where specific-oriented recommendations can be to position SL as a model of good practice at HEI, to encourage interdisciplinary collaboration with students, to highlight the knowledge application benefits from SL activities, and to use tailored approaches based on gender differences.

Limitations

While this study focused on students, it's recommended to extend the research to other stakeholders, such as teachers and external NGO representatives. Understanding the motivations and perspectives of these stakeholders is crucial for successful SL implementation. Particularly, investigating how teachers perceive and engage with SL activities could provide valuable insights into the dynamics of the process. As the study was conducted in the field of PE, exploring SL benefits and motivation factors in other fields of study can provide a broader perspective. Comparing results across disciplines could reveal commonalities and differences, contributing to a more comprehensive understanding of the impact of SL across various academic contexts. Additionally, the small sample of respondents can also be considered as one of the limitations. Therefore, it is recommended to use a larger sample in future research.

Authorship Contribution Statement

Miletic: Conceptualization, design, Editing/reviewing analysis, writing, final approval. Jadric: Conceptualization, analysis, writing, drafting manuscript. Miletic: Editing/reviewing, critical revision of manuscript.

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