

Maximizing Physical Education Leadership Effectiveness: Basis for Professional Development Program

Rui Ma*, Rosalie Meriales

Graduate School, Adamson University, CO 1000, Philippines

* Corresponding author: Rui Ma (Email: 519419391@qq.com)

Abstract: This study aims to assess physical education leadership effectiveness in Chinese schools as a basis for developing a professional development program to enhance leadership skills. It examines respondents' profiles, leadership practices, and identifies significant differences based on demographic factors. The researcher used a quantitative research design and utilized 384 students enrolled in Physical Education of the different universities and colleges in China. The study highlights that leadership practices among physical education teachers in Chinese schools are generally underdeveloped, with significant improvement needed in areas like teaching excellence and leadership competencies. A professional development program is recommended to enhance leadership capabilities and address specific needs across different age and gender groups. Educational institutions and program developers should focus on creating targeted leadership development initiatives for younger, female students in physical education, particularly from specialized institutions. Additionally, school administrators and policymakers should implement comprehensive professional development programs to enhance leadership competencies, teaching excellence, and ethical behavior among physical education teachers.

Keywords: Physical Education; Leadership Effectiveness; Professional Development Program.

1. Introduction

Leadership in Chinese physical education has emphasized the responsibility and mission of utilizing unique advantages to make significant contributions in a global perspective. Chinese school's leadership practices in the field of physical education is evolving to adapt to changing circumstances such as the shift towards a market economy influencing educational institutions as well as maintaining strong ties to local cultures and traditions. Notably, the Chinese government has committed to improving the physical education teachers' abilities by investing in more professional development programs.

Teachers of physical education in Chinese schools who possess high levels of emotional intelligence become better leaders. These teachers are able to connect with their students on a deeper level, creating a positive and supportive learning environment while managing their own emotions effectively, which helps them to remain calm and focused in challenging situations. However, challenges associated with sustainable leadership in physical education development in Southern rural Ningxia, China, such as lack of teacher development training, unavailable PE teachers, shrinking school sizes, and unclear curricula (Fu & Zhu, 2022) has an impact on affective qualities contributing to the decline in the importance of physical education and its potential to foster healthy habits. Physical education teachers who demonstrate a strong sense of empathy are more likely to be viewed as effective leaders by their students. These teachers are able to understand and respond to the needs of their students, creating a sense of trust and respect between teacher and student.

Chinese leadership styles emphasize harmonious relations, collective decision-making, and personal development rather than individual achievement. Three philosophical tenets namely Confucianism, Legalism, and Taoism have

significantly impacted Chinese leadership, fostering a paternalistic, caring, and hierarchical environment (Coppens, 2021). There is a great emphasis on personal development and expecting leaders to be inspirational and provide opportunities for growth. Chinese leaders are expected to use their communication skills to build relationships among employees and create harmony. Cooperation and collaboration are highly valued, and leaders are responsible for promoting these principles. Effective Chinese leadership involves building trust, especially affective trust, which links paternalistic leadership to employee performance. Overall, Chinese leadership places greater emphasis on emotional stability, interpersonal relationships, and maintaining harmony. These characteristics contribute to the success despite differing from Western leadership styles. Hence, the present study is relevant as it supports continuous assessment of leadership effectiveness among physical education teachers necessary in the growing demands in educational setting.

Promoting action-oriented leadership practices, such as moral leadership, can foster innovation and creativity among physical education teachers in Chinese schools, contributing to the enhancement of physical education programs and student outcomes (Chen, Et. al., 2022). Physical education teachers in Chinese schools who are action-oriented are more likely to be viewed as effective leaders by their colleagues. These teachers are proactive in identifying and addressing issues, and are able to motivate their colleagues to take actions as well. They are also able to adapt quickly to changing circumstances, which is particularly important in the fast-paced environment of a school. Physical education teachers who are action-oriented are more likely to be successful in implementing new programs and initiatives. These teachers are able to set clear goals and objectives, and are able to motivate their students and colleagues to work towards these goals. The concept of action orientation

encourages innovation and creativity among physical education teachers. Moral leadership has been found to positively affect the innovation behavior of physical education teachers, leading to increased engagement in both internal and external innovation processes

Physical education teachers in Chinese schools who are effective mentors are able to create a supportive learning environment that encourages students to take risks and learn from their mistakes. These teachers are able to provide constructive feedback that helps students to improve their skills and knowledge, and are able to create opportunities for students to take on leadership roles. Physical education teachers who empower their students are more likely to be viewed as effective leaders. Hence, these teachers are able to create a sense of ownership and responsibility among their students, which helps to motivate them to take an active role in their own learning.

2. Statement of the Problem

The researcher assessed the physical education leadership effectiveness among Chinese schools as basis for professional development program to improve leadership capabilities in the field of physical education.

Specifically, it sought to answer the following problems;

(1)What is the profile of the respondents in terms of;

1)Age;

2)Sex; and

3)School affiliation or currently enrolled?

(2)What is the assessment of the respondents on the leadership practices of physical education teachers among Chinese schools as to;

1)Affective Qualities;

2)Action Orientation;

3)Mentoring and Empowering;

4)Teaching Excellence; and

5)Research and Scholarship?

(3)Is there a significant difference on assessment of the respondents on the leadership practices of physical education teachers among Chinese schools when grouped according to their profile?

(4)What is the assessment of the respondents on the extent of the leadership practices to maximize leadership effectiveness in the field of physical education as to;

1). Leadership Competencies

2) Leadership Style; and

3) Leadership Effectiveness?

(5)Is there any significant difference on the assessment of the respondents on the extent of the leadership practices to maximize leadership effectiveness in the field of physical education when profile variables are considered?

(6)Based on the results of the study, what professional development program can be designed to improve leadership capabilities in the field of physical education?

3. Hypotheses

The following hypotheses are tested at .05 Level of Significance:

Ho1: There is no significant difference on assessment of the respondents on the leadership practices of physical education teachers among Chinese schools when grouped according to their profile.

Ho2: There is no significant difference on the assessment of the respondents as to the extent of the leadership practices

to maximize leadership effectiveness in the field of physical education when profile variables are considered.

4. Scope and Delimitation of Study

This study aims to assess the effectiveness of physical education leadership among Chinese schools and proposes a professional development program to enhance leadership capabilities in this field. The research will primarily focus on gathering data related to the profile of respondents, including their age, sex, and school affiliation. Additionally, it seeks to evaluate respondents' perceptions of leadership practices within physical education, encompassing affective qualities, action orientation, mentoring and empowering, teaching excellence, and research and scholarship. Furthermore, the study aims to explore how these practices contribute to maximizing leadership effectiveness, particularly in terms of leadership competencies, style, and overall effectiveness. It will also test the significant difference on the practices of maximizing leadership effectiveness in the field of physical education when grouped according to their profile. Based on the results of the study, it will serve as a basis for the creation of professional development program to improve leadership capabilities in the field of physical education

The scope of this research is limited to Chinese schools, which may affect the generalizability of findings to other educational contexts. Furthermore, while efforts will be made to ensure a representative sample, the study's conclusions may be influenced by factors such as respondent availability and willingness to participate. Additionally, as with any survey-based research, there is a possibility of response bias, where respondents may provide answers, they perceive as socially desirable rather than reflecting their true opinions. Despite these limitations, the study aims to provide valuable insights into physical education leadership in Chinese schools and inform the development of targeted professional development programs in this area.

5. Research Design

The study used Quantitative Descriptive Research design. This is used by the researcher to attain the study's main objective. The goal of descriptive study design is to gather data in a methodical manner in order to characterize a population, circumstance, or phenomena. More precisely, it assists in addressing the research problem's what, when, where, and how inquiries rather than its why. As explained by McCombes (2023), when the goal of the research is to discover traits, frequencies, trends, and classifications, descriptive research is a suitable option. When there is still plenty to learn about the subject or issue, it is helpful. Understanding how, when, and where something occurs is necessary before you can investigate why it occurs. Hence, since the main source of data is the survey, the researcher will also employ a quantitative method. The process of gathering and evaluating numerical data is known as quantitative method. It is useful for determining averages and patterns, formulating hypotheses, examining reliability, and extrapolating findings to larger populations.

6. Results and Discussion

1)Profile of the Respondents

Table 1. Profile of the Respondents

AGE	FREQUENCY	PERCENTAGE
15-17	215	56.0
18-20	169	44.0
Total	384	100.0
SEX	FREQUENCY	PERCENTAGE
Male	167	43.5
Female	217	56.5
Total	384	100.0
SCHOOL	FREQUENCY	PERCENTAGE
Hunan Normal University	115	29.9
Hunan University of Science and Technology	79	20.6
Hunan Sports Vocational College	190	49.5
Total	384	100.0

Table 1 presents the Profile of the Respondents. It shows the demographic characteristics of the respondents as to age, sex, and school affiliation. Among the 384 respondents, the majority fall within the 15-17 age group, with 215 or 56.0% of the total respondents, while 169 respondents or 44.0% are aged 18-20 which is the lowest frequency in terms of age profile. With regards to sex, a greater proportion of the respondents are female, making up 56.5% or 217 respondents. In contrast, males account for 43.5% or 167 respondents. In terms of school affiliation, the largest group of respondents, with 190 respondents or 49.5%, are from Hunan Sports Vocational College, followed by 29.9% or 115 respondents from Hunan Normal University, and 20.6% or 79 respondents from Hunan University of Science and Technology.

As stated in the data, in terms of age, there is a higher representation of younger students, which indicates that the majority of the respondents are in their mid-teen years. This reflects the typical enrollment age for physical education programs in Chinese schools, which implies that leadership development for physical education (PE) teachers may need to cater to a younger demographic, which aligns with the growing need to foster leadership qualities early in educational settings. This is similar to Yang & Márquez, (2023), who emphasizes the need to cultivate leadership skills in younger students for long-term engagement in physical education. Similarly, Chen (2019) highlights the need to cultivate leadership skills in younger students, emphasizing that early exposure to leadership training can enhance students' self-efficacy and civic engagement, which leads to improved academic performance and personal development. This aligns with findings from a study by Yang & Márquez, (2023) on student leadership training programs, which demonstrated that structured leadership initiatives can enhance the leadership capabilities of adolescents, preparing them for future roles in Education and beyond ("Evaluating the Effectiveness of a Student Leadership Training Program for the Early Adolescent Students in Kanchanaburi Province, Thailand", 2023). On the other hand, the lower percentage of respondents aged 18-20 might mean that as students grow older, they may pursue different academic or professional interests, which highlights a potential gap in retaining older students in PE programs. Addressing this gap through leadership development initiatives could help sustain interest

among older students by providing more advanced or tailored PE leadership opportunities (Cheon & Lim, 2021).

In terms of sex profile, the higher percentage falls under female respondents, which may point to a greater interest or enrollment in physical education programs among females. This contrasts with the traditionally male-dominated sports and physical education field, emphasizing a shift in gender dynamics. Female respondents' higher frequency supports the idea of promoting gender-sensitive leadership practices in PE settings. According to Wulandari (2022), transformational leadership can encourage greater engagement among female educators and students, which implies that leadership programs must be inclusive and considerate of gender differences to maximize their effectiveness. The lower number of male respondents may point to the need for more male-specific initiatives to balance gender representation in physical education programs (Sağın, 2022).

In terms of school affiliation, Hunan Sports Vocational College, having the highest number of respondents reflects its specialization in sports education, which attracts more students focused on physical education. This means that leadership programs designed for this institution could emphasize more specialized PE leadership skills and offer opportunities for developing expertise in sports management (Chen & Wu, 2021). On the other hand, the lower representation from Hunan University of Science and Technology may indicate that PE is not as central to its academic offerings, pointing to the need for more focused efforts to enhance leadership in physical education within non-specialist institutions. Schools with a broader range of academic focuses might benefit from incorporating leadership training that aligns physical education with other academic disciplines, enhancing the holistic development of PE leadership skills (Potop, 2024). This integration is about enhancing physical skills and cultivating social and emotional competencies that are essential for effective leadership ("Integration of Health and Education in Teacher Education Programs", 2023).

The demographic distribution of the respondents highlights key areas for enhancing leadership development in physical education, specifically for younger students and female participants. Given the higher representation from Hunan Sports Vocational College, future leadership programs could consider tailoring initiatives that reflect the institution's specialized focus on sports education. However, increasing male participation and engagement in PE leadership roles, and targeting older students are essential to ensure balanced leadership growth across age groups and genders. A comprehensive professional development program would benefit from addressing these diverse needs to foster an inclusive, action-oriented leadership culture in Chinese physical education settings.

2) Assessment of the Respondents on the Leadership Practices of Physical Education Teachers among Chinese Schools

Table 2 displays the Assessment of the Respondents on the Leadership Practices of Physical Education Teachers among Chinese Schools as to Affective Qualities. It is noted that 7 out of 8 indicators have a "slightly practiced" interpretation and only indicator 3 is interpreted as "moderately practiced".

Table 2. Assessment of the Respondents on the Leadership Practices of Physical Education Teachers among Chinese Schools as to Affective Qualities

INDICATORS	MEAN	SD	INTERPRETATION	RANK
1. The physical education teachers demonstrate empathy towards students' needs and concerns.	2.34	0.94	Slightly Practiced	3
2. The physical education teachers create a positive and inclusive learning environment in the classroom.	2.31	0.97	Slightly Practiced	5
3. The physical education teachers show respect towards students' opinions and ideas.	2.51	0.98	Moderately Practiced	1
4. The physical education teachers communicate with students in a supportive and encouraging manner.	2.33	0.99	Slightly Practiced	4
5. The physical education teachers display enthusiasm and passion for teaching physical education.	2.16	1.10	Slightly Practiced	7
6. The physical education teachers build rapport and trust with students.	2.46	0.95	Slightly Practiced	2
7. The physical education teachers demonstrate patience and understanding towards students' learning challenges.	2.10	1.02	Slightly Practiced	8
8. The physical education teachers promote a sense of belonging and community among students in the class.	2.17	0.95	Slightly Practiced	6
Composite Mean	2.30	0.40	Slightly Practiced	

LEGEND: HIGHLY PRACTICED (=4.51-5.0); PRACTICED (=3.51-4.50); MODERATELY PRACTICED (=2.51-3.50); SLIGHTLY PRACTICED(=1.51-2.50); NOT PRACTICED AT ALL (=1.0-1.50).

Data also shows that indicator 3 “the physical education teachers demonstrate respect towards students' opinions and ideas” has the highest mean score of 2.51 with a 0.98 SD which is interpreted as “moderately practice”. This is followed by the physical education teachers building rapport and trust with students, which received a mean score of 2.46, with a 0.95 SD, and is interpreted as slightly practiced but ranked second. In contrast, the lowest mean scores of 2.10 with 1.02 SD were observed in the indicators where teachers display enthusiasm and passion for teaching physical education and demonstrate patience and understanding towards students' learning challenges. The composite mean for all indicators is 2.30 with a 0.40 SD, indicating that the affective qualities are slightly practiced.

As indicated in the data, the highest mean score for demonstrating respect toward students' opinions implies that physical education teachers are moderately effective in valuing student input, which aligns with the importance of individualized consideration in educational leadership. This finding supports Cruz and Kim's (2023) view on the significance of understanding and addressing each student's unique needs, creating a positive learning environment. Building rapport and trust with students reflects a crucial leadership quality that fosters a supportive learning atmosphere, which is consistent with Zhang et al.'s (2023) emphasis on the role of moral leadership in enhancing teacher-student relationships. On the other hand, the lowest mean scores in enthusiasm, passion, patience and understanding point to areas needing improvement. The lack of enthusiasm and passion among physical education teachers can adversely affect student engagement and motivation, as noted in Raju's (2019) work on the importance of teacher commitment in promoting physical activity. Similarly, insufficient patience and understanding could hinder effective teaching, specifically in a field that requires adaptability to

diverse student needs. These results indicate an important area for professional development, as highlighted by Campos et al. (2020), who stress the importance of adaptive leadership in managing educational complexities and fostering a supportive environment. The composite mean of supports that affective qualities are lacking. This means that professional development should focus on improving these emotional and interpersonal skills to improve the leadership effectiveness of physical education teachers.

The assessment of affective qualities in leadership practices reveals a need for targeted improvements. Leadership development programs for physical education teachers should focus on enhancing enthusiasm, passion, and patience, as these qualities are crucial for fostering a motivating and supportive learning environment. Ensuring that teachers can effectively build rapport and respect student opinions should be complemented by efforts to boost their overall affective engagement. By addressing these areas, schools can support their teachers in creating an inclusive and dynamic educational experience that aligns with the evolving demands of physical education.

Table 3 displays the assessment of the respondents on the leadership practices of physical education teachers among Chinese schools as to Action Orientation. It is noted that 7 out of 8 indicators have a “slightly practiced” interpretation, while only indicator 5 is interpreted as “moderately practiced.” Likewise, data shows that indicator 5, "The physical education teachers encourage students to set challenging but achievable goals for themselves," has the highest mean score of 2.55 with a 1.04 SD, interpreted as “moderately practiced.” This is followed by the teachers encouraging students to reflect on their learning experiences and set new goals, which received a mean score of 2.48, with a 0.96 SD, and is interpreted as “slightly practiced,” ranked second. Hence, the lowest mean score of 2.09 with a 0.94 SD was observed in the

indicator “teachers adapt teaching strategies to meet individual student needs”. The composite mean for all indicators is 2.30, with a 0.38 SD, indicating that the action

orientation of physical education teachers is "slightly practiced."

Table 3. Assessment of the Respondents on the Leadership Practices of Physical Education Teachers among Chinese Schools as to Action Orientation

INDICATORS	MEAN	SD	INTERPRETATION	RANK
1. The physical education teachers set clear goals and expectations for student learning.	2.41	0.91	Slightly Practiced	3
2. The physical education teachers provide timely feedback to students on their progress and performance.	2.11	0.88	Slightly Practiced	7
3. The physical education teachers encourage students to take initiative and responsibility for their own learning.	2.24	1.01	Slightly Practiced	5
4. The physical education teachers adapt teaching strategies to meet individual student needs.	2.09	0.94	Slightly Practiced	8
5. The physical education teachers encourage students to set challenging but achievable goals for themselves.	2.55	1.04	Moderately Practiced	1
6. The physical education teachers promote a growth mindset and resilience in students.	2.35	1.00	Slightly Practiced	4
7. The physical education teachers facilitate opportunities for students to apply their learning in real-life situations.	2.16	1.05	Slightly Practiced	6
8. The physical education teachers encourage students to reflect on their own learning experiences and set new goals.	2.48	0.96	Slightly Practiced	2
Composite Mean	2.30	0.38	Slightly Practiced	

LEGEND: HIGHLY PRACTICED (=4.51-5.0); PRACTICED (=3.51-4.50); MODERATELY PRACTICED (=2.51-3.50); SLIGHTLY PRACTICED(=1.51-2.50); NOT PRACTICED AT ALL (=1.0-1.50)

This indicates that while physical education teachers moderately encourage students to set challenging goals, they slightly practice promoting broader action-oriented behaviors, such as adapting strategies for individual needs and providing timely feedback. The fact that the highest mean, which is only moderately practiced, relates to goal-setting implies that students perceive their teachers as moderately effective at instilling ambition, and less in other critical areas of action orientation. This finding can be tied to the importance of transformational leadership, where a clear vision and challenging objectives are essential. Chang et al. (2021) emphasized that transformational leaders can stimulate creativity and initiative, which aligns with the moderately practiced ranking for setting challenging goals. On the other hand, the lowest-ranked indicator, where teachers adapt their teaching strategies to individual needs, reflects room for improvement in personalized instruction, which is crucial for maintaining student engagement. This gap in adaptive teaching may point to the need for leadership practices that emphasize ethical and moral dimensions. As noted by Chen et al. (2022), teachers who lack moral leadership support may struggle to adapt their strategies to meet individual student needs, where adaptability is essential. Similarly, Gazali et al. (2022) highlight that democratic leadership, which encourages cooperation and positive interaction, correlates with better learning outcomes in physical education, which

indicates that this leadership style could foster a more interactive and adaptive teaching environment. Moreover, the composite mean emphasizes that "action orientation" is not fully embraced by physical education teachers. This reflects room for improvement between the recognition of its importance and its regular application in practice. According to Chen et al. (2022), leadership styles that promote innovation and confidence can empower teachers to adopt more action-oriented teaching approaches. This aligns with the study’s goal of enhancing leadership effectiveness among PE teachers, as the slightly practiced rating implies that while teachers recognize the importance of action orientation, they may lack the leadership support or resources necessary to implement it in their teaching. Strengthening leadership practices that bridge this gap could improve teacher performance and student outcomes in physical education.

The respondents' assessment shows that action-oriented leadership practices among physical education teachers are only slightly practiced. Teachers excel moderately in goal-setting but struggle with personalized instruction and adapting teaching strategies. To improve, physical education programs should prioritize transformational leadership approaches that foster innovative practices, provide ethical guidance, and support adaptive teaching strategies. This may involve leadership training and professional development to bridge the gap between existing practices and the desired

action orientation that can enhance student learning outcomes.

Table 4 shows the Assessment of the Respondents on the Leadership Practices of Physical Education Teachers among Chinese Schools as to Mentoring and Empowering. Data reveals that 7 out of 8 indicators have a “slightly practiced”

interpretation, while only indicator 7 is interpreted as “moderately practiced.” Indicator 7 "The physical education teachers advocate for student interests and well-being within the school environment," interpreted as “moderately practiced.” is also the highest mean score of 2.82.

Table 4. Assessment of the Respondents on the Leadership Practices of Physical Education Teachers among Chinese Schools as to Mentoring and Empowering

INDICATORS	MEAN	SD	INTERPRETATION	RANK
1. The physical education teachers provide guidance and support to help students reach their full potential.	2.33	0.93	Slightly Practiced	4
2. The physical education teachers inspire confidence and self-belief in students.	2.16	1.00	Slightly Practiced	6.5
3. The physical education teachers mentor students in developing leadership skills and qualities.	2.16	1.05	Slightly Practiced	6.5
4. The physical education teachers empower students to take on leadership roles within the class or school community.	2.41	1.02	Slightly Practiced	2
5. The physical education teachers foster a sense of autonomy and independence in students' learning.	2.35	1.06	Slightly Practiced	5
6. The physical education teachers provide opportunities for student voice and choice in decision-making processes.	2.40	0.89	Slightly Practiced	3
7. The physical education teachers advocate for student interests and well-being within the school environment.	2.82	1.04	Moderately Practiced	1
8. The physical education teachers promote a culture of collaboration and teamwork among students.	2.11	1.12	Slightly Practiced	8
Composite Mean	2.35	0.39	Slightly Practiced	

LEGEND: HIGHLY PRACTICED (=4.51-5.0); PRACTICED (=3.51-4.50); MODERATELY PRACTICED (=2.51-3.50); SLIGHTLY PRACTICED(=1.51-2.50); NOT PRACTICED AT ALL (=1.0-1.50).

with a 1.04 SD. This means that PE teachers actively work to promote the interests of their students. Following this, teachers empowering students to take on leadership roles within the class or school community scored a mean of 2.41 with a 1.02 SD, which is “slightly practiced,” indicating that while students are given some leadership opportunities, there is room for improvement. Likewise, the lowest mean score, 2.11 with a 1.12 SD, was found in the indicator "The physical education teachers promote a culture of collaboration and teamwork among students," interpreted as “slightly practiced,” this implies that fostering teamwork is not consistently emphasized. Moreover, the composite mean value of 2.35, with a 0.39 SD, underscores that mentoring and empowering practices of PE teachers are “slightly practiced.”

This means that while PE teachers advocate for student well-being, which aligns with ethical leadership practices (Chen et al., 2022), the slightly practiced ratings in other areas highlight gaps in leadership practices that could hinder student development. The moderately practiced score in advocating for students’ interests implies that teachers are focused on student well-being but may lack consistent approaches to fostering leadership and independence. The lowest mean score reflects the need to enhance collaboration

and teamwork in physical education, an area that is important for developing social and leadership skills in students. As Liu (2023) noted, strong teacher leadership, especially in mentoring, contributes to a collaborative culture within schools, which could explain the lower performance in this area. Empowerment in leadership roles (Wang et al., 2022) and promoting autonomy (Gazali et al., 2022) are vital components of effective mentoring that appear to be slightly underutilized in PE teaching. The composite mean reflects a consensus on the assessment of mentoring and empowering practices, further affirming that PE teachers need to enhance their leadership capabilities to improve student outcomes.

The assessment reveals that mentoring and empowering practices among PE teachers in Chinese schools are underdeveloped and require targeted improvement. To deal with this, professional development programs should be implemented to enhance PE teachers’ skills in promoting collaboration and empowering students. These programs should focus on distributed leadership models and ethical leadership, as noted by Wang et al. (2022), which can help create a more dynamic and inclusive educational environment. In addition, schools should emphasize fostering teamwork and creating a culture of collaboration in PE classes, as these

are important for individual and collective student development.

7. Conclusion

Based on the significant findings of the study, the following conclusions were established:

1)The profile of the respondents reveals that the majority are female, younger students, mostly from Hunan Sports Vocational College. This finding implies a need for leadership development initiatives in physical education that cater to younger, female participants, and reflect the strong representation from specialized institutions like Hunan Sports Vocational College.

2)The findings indicate that the leadership practices of physical education teachers in Chinese schools are underdeveloped, with all key components such as affective qualities, action orientation, mentoring and empowering, teaching excellence, and research and scholarship being only a "slightly practiced". This implies that there is room for improvement in leadership practices among PE teachers, particularly in fostering a more supportive and motivating learning environment.

3)There are no significant differences in the leadership practices of physical education teachers across different age groups, genders, and schools, except for the "Teaching Excellence" indicator, which shows a significant difference both by age and sex. This means that while leadership practices are consistent, efforts to enhance teaching excellence should be tailored to address the specific needs and characteristics of different age groups and genders among PE teachers.

4)The assessment reveals that leadership practices in physical education are underdeveloped, with competencies, leadership styles, and effectiveness being applied to a "slight extent". This indicates a lack of leadership among physical education teachers, particularly in areas such as ethical behavior and achieving team goals. The moderate application of transformational leadership and feedback provision highlights some strengths, but the data reflects a need for more comprehensive development of leadership skills to enhance overall effectiveness in the field.

5)The assessment reveals no significant differences in the perception of leadership practices in physical education based on age, sex, or school affiliation. This implies that leadership practices are consistently viewed across various demographic groups and educational institutions, indicating a uniform perception of leadership effectiveness in physical education.

6)There is a need to design a professional development program to improve leadership capabilities in the field of physical education.

8. RECOMMENDATIONS

In the light of the findings of the study and conclusions drawn, the following recommendations are advanced:

1)To Educational Institutions and Program Developers in Physical Education: Create leadership development initiatives that specifically target younger, female students. Incorporate strategies that address their unique needs and experiences, and design programs that reflect the specialized focus of institutions like Hunan Sports Vocational College. This will ensure that these initiatives are connected with the academic and professional goals of the students in sports education.

2)To School Administrators and Educational Policy Makers: Enhance the leadership practices of physical education teachers by implementing targeted professional development programs. Focus on building affective qualities, promoting action orientation, and strengthening mentoring and empowering skills among PE teachers. Encourage ongoing training in teaching excellence and research engagement to ensure that teachers are well-versed in the latest pedagogical strategies and evidence-based practices. In addition, establish mentorship opportunities and peer collaboration sessions to foster a supportive learning environment, enabling PE teachers to effectively motivate and guide students towards achieving their full potential.

3)To School Administrators and Education Policymakers: Prioritize the development of targeted professional development programs aimed at enhancing teaching excellence among physical education teachers. Customize these programs to address the distinct needs and characteristics of different age groups and genders. This ensures that all teachers receive the necessary support and training to excel in their roles and contribute to student learning outcomes.

4)To Physical Education Program Administrators and School Leaders: Redesign professional development programs for physical education teachers to focus on enhancing leadership competencies, styles, and effectiveness. Prioritize training that addresses ethical behavior, goal achievement, and transformational leadership techniques. Equip teachers with resources and support to build these skills and improve overall leadership in physical education.

5)To Physical Education Program Administrators and School Leaders: Develop standardized leadership training programs that can be universally applied across different demographic groups and educational institutions. Since leadership practices are perceived uniformly, focus on implementing a consistent approach to enhance leadership competencies, styles, and effectiveness in physical education. Ensure that these programs address the specific needs of the field, fostering improvement in leadership practices regardless of age, sex, or school affiliation.

6)To Physical Education Program Administrators and School Administrators: Create a professional development program to improve leadership skills in physical education. Focus on building competencies, promoting ethical behavior, and setting and achieving goals, while also using transformational leadership techniques. Target the program for younger and mostly female participants, especially from specialized schools. Make sure the program addresses consistent views across different ages, genders, and schools, and pay extra attention to areas like teaching excellence where there are significant differences. This will help boost leadership skills and effectiveness in physical education.

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