



# Indonesian Journal of Multidisciplinary Research



Journal homepage: <http://ejournal.upi.edu/index.php/IJOMR/>

## Learners' 21st Century Skills Special Program in Sports Curriculum

Vivencio L. Calixtro, Jr.\*

Bohol Island State University, Tagbilaran City, Bohol, Philippines

\*Correspondence: E-mail: [calixtro.vivencio@bisu.edu.ph](mailto:calixtro.vivencio@bisu.edu.ph)

### ABSTRACT

This study generally aimed to measure the 140 learners' 21st-century skills in the Special Program in Sports (SPS) curriculum among selected schools in Region XII in the Philippines. The descriptive-correlational design was used in this study. The frequency, percentage, mean, standard deviation, and one-way ANOVA were employed to offer a good analysis, interpretation, and result of the data. According to the findings about the demographic profile of the respondents, SPS learners were 16 years old, the majority were men, and the majority had a normal BMI status. Furthermore, the findings demonstrated that the level of learners' 21st-century skills in terms of learning skills, literacy skills, and life skills was verbally described as agree and interpreted as good. Moreover, the F-test using ANOVA for one-way classification results of the levels of 21st-century skills of SPS learners among implementing schools in Region XII were only somewhat correlated. These results indicated that the comprehensive SPS curriculum creates environments that foster the growth of learners' 21st-century skills, and more educational opportunities for teachers are required to improve the teaching of 21st-century skills.

© 2024 Kantor Jurnal dan Publikasi UPI

### ARTICLE INFO

#### Article History:

Submitted/Received 07 May 2024

First Revised 29 Jun 2024

Accepted 15 Aug 2024

First Available online 16 Aug 2024

Publication Date 01 Sep 2024

#### Keyword:

21st Century Skills,  
Special Program in Sports (SPS)  
Curriculum,  
SPS Learners.

## 1. INTRODUCTION

In the 21st century, the education landscape has evolved significantly, demanding a shift towards equipping learners with skills vital for success in a rapidly changing global environment. One prominent educational initiative addressing this need is the Special Program in Sports (SPS) curriculum, which aims to develop learners' athletic abilities and cultivate a broader range of competencies known as 21st-century skills. Nevertheless, the SPS curriculum faces challenges in effectively integrating 21st-century skills. The focus often shifts from physical training to developing innovativeness, analytical reasoning, cooperation, and transmission. Educators require comprehensive training and professional development to integrate these skills into sports training. Standardized assessment methods also need to be improved, limiting progress measurement. Equality and inclusion are also challenges, with socioeconomic disparities and cultural barriers limiting participation. Integrating 21st-century skills with core subjects remains a challenge. Thus, Collaborative efforts among policymakers, educators, sports coaches, and education stakeholders are needed to design inclusive SPS curricula that enhance athletic performance and develop 21st-century skills.

Moreover, the Philippine Department of Education's Bureau of Secondary Education created the Special Program for Sports (SPS) with a unique curriculum to assist learners who have an interest in, passion for, or skill in sports in laying the foundation for a future in sports. DepEd Order No. 25, s. 2015 lays out the rules and regulations to be implemented in the program. Many research investigations have demonstrated that education through play and sport enables learners to learn more and participate in the process while also improving the social bonds among participants. It creates a more favorable environment for communication and encourages a desire to learn (Revel & Arnesano, 2014). Pestano and Ibarra (2021) claim that the Special Program in Sports (SPS) in the Philippines provides substantial advancement in sports and education and acts as a platform for developing learners' athletic and sporting abilities. The K-12 curriculum used in the SPS program is modeled after a conventional high school and offers a four-year secondary curriculum focusing on individual, team, and dual sports.

In addition, the SPS curriculum plays a pivotal role in nurturing learners' athletic talents and promoting physical fitness. Amidst the evolving demands of the 21st century, there is a growing recognition of the need to integrate broader competencies known as 21st-century skills into sports education, which are crucial for preparing learners to prosper in an increasingly interconnected and technologically advanced world. Learners should also present scenarios, study game films, and collaborate in groups to develop solutions. It should be encouraged to develop original exercises, games, or training techniques and engage in communication and presenting activities. Researching and analyzing data about sports should be done to improve information literacy. The aim is to enhance students' 21st-century skills through innovative learning methods, but the country's Secondary School System (SPS) faces challenges in effectively integrating these skills. The curriculum's focus on physical training and competitive achievements often neglects developing skills like problem-solving, adaptability, and teamwork. Teachers may lack adequate training to integrate these skills effectively. Assessment methods may not accurately measure learners' progress. Access to technology and resources may help innovative teaching approaches. Greater integration of 21st-century skills across sports education and core academic subjects is also needed. Moreover, Policymakers, educational institutions, sports organizations, and community stakeholders must work together to improve the Special Program in Sports curriculum, fostering 21st-century skills among Filipino learners.

In Region XII, the SPS curriculum is a cornerstone for developing learners' athletic abilities and promoting physical fitness. However, in the context of the 21st century, there is an increasing recognition of the need to equip learners with 21st-century skills alongside sports-specific competencies. These skills encompass critical thinking, communication, creativity, collaboration, and digital literacy, essential for navigating today's globalized and technology-driven society. Thus, Region XII's SPS faces challenges integrating 21st-century skills among learners, including limited emphasis, inadequate teacher preparation, assessment issues, equitable resource access, and integration with academic subjects. The curriculum often focuses on physical training and competitive performance, highlighting the need for a more comprehensive approach (Bessa *et al.*, 2019). Additionally, infrastructure gaps and alignment between SPS curricula and mainstream education are crucial for ensuring equitable opportunities for learners to develop physical and 21st-century skills. Nonetheless, Region XII requires collaboration among regional authorities, schools, teachers, parents, and community stakeholders to integrate 21st-century skills into the SPS curriculum.

This study aimed to investigate the 21st-century curriculum and to promote real learning, problem-solving, critical thinking, collaboration, responsible technology use, and cross-disciplinary instruction in sports education. However, better documentation of 21st-century pedagogy in specialized programs like the Special Program in Sports is needed.

## 2. LITERATURE REVIEW

The literature on 21st-century skills emphasizes the need for learners to develop diverse skills beyond rote memorization. Several critical theories underpin this approach, offering valuable insights for educators in the SPS domain. Thus, the Special Program in Sports (SPS) curriculum provides an exceptional setting for developing critical 21st-century skills in addition to physical talent. The following learning theories can be used to improve this procedure: Social Learning Theory highlights the power of observation in shaping behavior. An SPS curriculum that emphasizes positive role models who demonstrate effective communication, collaboration, and sportsmanship can provide valuable learning opportunities for young athletes. By observing coaches and teammates who embody these traits, students can internalize and apply them in their athletic endeavors. Secondly, the Self-Determination Theory (Deci & Ryan, 2000) postulates that motivation flourishes when learners feel a sense of autonomy, competence, and relatedness. The SPS curriculum can nurture these needs by allowing students to set personal goals, choose their training regimens, and build a strong team spirit. It fosters a more engaged learning environment where students are intrinsically motivated to succeed. Thirdly, the cognitive flexibility theory posits that the ability to adapt and make quick decisions is paramount for athletes. Theories like Cognitive Flexibility emphasize the importance of activities that develop critical thinking, problem-solving, and strategic decision-making. SPS programs can integrate drills and game-like scenarios that challenge students to think on their feet, react to changing situations, and develop creative solutions to overcome challenges. Lastly, Technology Integration Theory claims that technology offers many learning tools. The SPS curriculum can leverage this potential by incorporating video analysis for self-assessment, online research exploring training methods and sports science principles, and even remote collaboration tools to connect with coaches or athletes from other locations. It fosters a technologically savvy and adaptable learning environment for the 21st-century athlete.

Additionally, including the SPS in the DepEd curriculum has revolutionized the educational system, empowering learners to excel in various disciplines, thereby enhancing their societal citizenship.

### 3. METHODS

This study utilized a descriptive-correlational design to examine 21st-century competencies and relationships with learners. The study focused on schools offering Special Programs for Sports (SPS) in the region, including Isulan National High School, General Santos City National High School, and Tupi National High School in the Department of Education at Region XII. These schools have experienced significant growth in SPS offerings and have operated for several years. The study involved 140 learners from the SPS Curriculum of the 21st century, selected through total enumeration sampling, a purposeful sampling method. Moreover, this study utilized survey questionnaires and research instruments to gather data on learners' 21st-century skills. In addition, this study got permission from the Regional Director to distribute questionnaires to schools with the SPS curriculum. The permission was granted, and the data was collected, analyzed, and interpreted with the help of a statistician.

Furthermore, the data was tallied and computed to obtain scientifically based results. The results were interpreted using statistical tools. This study utilized the Statistical Package for the Social Sciences (SPSS) to perform frequency, standard deviation, mean, and one-way ANOVA. All hypothetical questions were analyzed and interpreted at a 0.05 level of significance. Thus, one-way ANOVA was employed, which examines the learners' perceptions of the 21st century.

### 4. RESULTS AND DISCUSSION

**Table 1** reveals the frequency and percentage distribution of Special Programs in Sports learners' ages. The highest frequency was among 16-year-olds, accounting for 66% of respondents. The lowest frequency was observed among 20-year-olds, with most learners aged 16 and above. This means that most SPS learners are 16 and above, with 16-year-olds being the most frequent (66%). This highlights the need for educational strategies that integrate physical training and 21st-century skills, and addressing demographic trends is crucial for holistic development and future challenges. Due to reduced funding and screen time, [Dohle and Wansink \(2013\)](#) recommend promoting regular physical activity at a young age through club or school sports as a long-term investment. In addition, the table shows that male SPS learners, accounting for 51% of respondents, have the highest frequency of 72, while female students, accounting for 49%, have the lowest frequency of 68. This means the gender distribution is balanced, indicating the program's inclusivity. The findings emphasize the need for an equitable learning environment that supports diverse needs and interests, promoting opportunities for both genders to excel in sports. [Schover \(2019\)](#) highlighted the ongoing questioning of women's physical fitness in sports due to physiological concerns like menstrual cycle, reproduction, and breast and genitalia injury. Lastly, the table shows learners' frequency and percentage distribution in special sports programs. Normal BMI students accounted for 89% of respondents, followed by 6%, underweight students at 4%, and obese learners at 1%. The majority of SPS learners have normal BMI status. The study emphasizes the need for health promotion among SPS learners, highlighting the importance of addressing their BMI needs through physical activities and nutrition education, promoting inclusivity, and enhancing athletic performance. [Dong et al. \(2019\)](#) highlights the close relationship between health and physical fitness, but the changes in fitness are due to the significant dietary shift from food scarcity to high-fat diets.

The study analyzed the 21st-century learning skills of special programs in sports learners, revealing that they believe they possess good skills such as critical thinking, creativity, cooperation, and communication. The results showed a mean of 3.67, indicating strong

agreement and a good perception of these skills. In today's educational environment, students must develop critical thinking, creativity, teamwork, and communication skills. Emphasized the importance of these four abilities for success in their chosen careers. Critical thinking challenges assertions, creativity encourages creativity, communication articulates ideas distinctively, and collaboration instills the idea that collaboration can lead to useful outcomes.

**Table 1.** Frequency and Percentage Distribution of the Special Program in Sports (SPS) Learners.

Indicators	Frequency	Percentage
<b>Age</b>		
15 years old	15	11%
16 years old	92	66%
17 years old	25	18%
18 years old	6	4%
20 years old	2	1%
<b>Gender</b>		
Male	72	51%
Female	68	49%
<b>BMI Status</b>		
Normal	124	89%
Underweight	6	4%
Overweight	9	6%

Additionally, the study analyzed the level of information, media, and technological literacy among learners in a specific program for athletes. The results showed that students have fair 21st-century skills, except for decoding unreliable and fake news (see **Table 2**). However, they have good skills in locating information online, using platforms for expression, backing up claims, using technology, and using social media for learning. Overall, students perceive themselves to have good 21st-century literacy skills, with a mean score of 3.53. This suggests that learners' self-assessment of digital capabilities is positive, indicating readiness for digital technology. Educators can capitalize on strengths while addressing areas for improvement. [Foo et al. \(2021\)](#) emphasizes the importance of literacy skills in choosing trustworthy information sources and separating important from non-important information, emphasizing the significance of reading comprehension. Lastly, the table reveals that learners in special sports programs possess life skills such as flexibility, leadership, initiative, productivity, and social skills. The analysis shows a mean score of 3.81, indicating agreement and good belief in their 21st-century talents, with learners believing their skills are high quality. This suggests that students perceive their skills to be of high quality, reflecting their confidence and readiness to apply these skills in various aspects of their academic, athletic, and personal lives. [Kivunja \(2015\)](#) emphasizes the importance of learners developing critical thinking, problem-solving, communication, cooperation, creativity, and invention skills for learning and innovation. Some schools in Region XII have successfully taught these life skills, preparing learners for life after school.

**Table 2.** Level of 21st Century Skills of Special Program in Sports Learners.

Indicators	Mean	SD	Description
Skills in Learning	3.67	0.09	Agree
Skills in Literacy	3.53	0.16	Agree
Skills in Life	3.71	0.22	Agree
<b>Total Mean</b>	<b>3.63</b>	<b>0.16</b>	<b>Agree</b>

The correlation analysis reveals no significant association between Age and 21st-century competencies of SPS learners, with a slight inverse relationship observed (see **Table 3**). This suggests that the SPS pupils' ages have little bearing on their 21st-century talents. [Tindowen et al. \(2017\)](#) believed there were no significant changes in critical thinking, teamwork, communication, creativity, innovation, self-orientation, global connectivity, ICT proficiency, or community connections among age groups.

**Table 3.** Correlation Analysis between the Age and the 21st Century Skills of SPS Learners.

Variables	r	p-value
Skills vs Age	-0.017	0.870

**Table 4** shows no gender difference in 21st-century abilities among SPS learners, indicating that the curriculum teaches male and female learners the same skills, with a smaller mean difference of 0.22. Equality in skill acquisition is crucial for a balanced, inclusive SPS environment, equipping all learners with the necessary competencies. Maintaining gender-neutral practices in sports programs promotes equality and maximizes potential. [Jun et al. \(2021\)](#) highlighted that gender influences all aspects of life, including research, and these inequalities impact research ability between men and women.

**Table 4.** The Independent Sample t-test Result of the 21st Century Skills Comparison based on the Gender of SPS Learners.

Groups	Mean	SD	df	t-computed value	p-value
Male	3.58	0.86	139	1.58	0.12
Female	3.80	0.84			
Mean Difference	0.22				

A one-way ANOVA comparing the 21st-century abilities of special sports learners and implementing schools in Region XII showed no significant difference in learning skills between the two groups (see **Table 5**). The study reveals that learners in Region XII's special sports program, including General Santos City National High School, Tupi National High School, and Isulan National High School, exhibit nearly equal 21st-century learning skills, including critical thinking, creativity, collaboration, and communication. [Alvarez-Dionisi \(2017\)](#) suggests that a 21st-century learning model involves intellectual risk-taking, learning dispositions, and inclusive school communities. It emphasizes competency and content, reducing passive learning experiences for students.

**Table 5.** The F-test using Analysis of Variance (ANOVA) for One-way Classification result of the Levels of 21st Century Skills of SPS Learners among Implementing Schools in Region XII in terms of Skills in Learning.

	Sum of Squares	df	Mean Square	F	p	Interpretation
DRU	0.32	2	0.16	0.40	0.67	Not Significant
Error	54.79	137	0.40			
Total	55.12	139				

A one-way ANOVA compared 21st-century literacy skills of special programs in sports learners in Region XII schools, finding no significant difference in reading skills among the programs (see **Table 6**). The study reveals that learners in Region XII's special sports program at General Santos City National High School, Tupi National High School, and Isulan National High School have comparable 21st-century literacy skills, including information, media, and technological literacy. Highlight the importance of literacy in the 20th century, where data

extraction and pre-coding were crucial. In the 21st century, knowledge technology allows for access to vast information, but it is crucial to understand and deal with ambiguity from diverse perspectives.

**Table 6.** The F-test using Analysis of Variance (ANOVA) for One-way Classification result of the Levels of 21st Century Skills of SPS Learners among Implementing Schools in Region XII in terms of Skills in Literacy.

	Sum of Squares	df	Mean Square	F	p	Interpretation
DRU	0.13	2	0.06	0.16	0.85	Not Significant
Error	56.15	137	0.41			
Total	56.27	139				

A one-way ANOVA comparing 21st-century abilities of special sports Learners in Region XII schools showed no significant difference in life skills among learners participating in the program (see **Table 7**). The study reveals that learners in Region XII's special sports program at General Santos City National High School, Tupi National High School, and Isulan National High School possess nearly equal 21st-century life skills, including adaptability, leadership, initiative, productivity, and social skills. Highlights the importance of integrating 21st-century skills in education, such as creative thinking and problem-solving, into classrooms. Technology has transformed learning, making classrooms more dynamic and global. Students now have many learning opportunities, cross-curricular connections, and inquiry-based learning. Teachers must shift from expert to facilitator mode, empowering students to apply new knowledge. [Kivunja \(2015\)](#) emphasizes critical thinking, problem-solving, communication, cooperation, creativity, and invention for learning and innovation capabilities.

**Table 7.** The F-test using Analysis of Variance (ANOVA) for One-way Classification result of the Levels of 21st Century Skills of SPS Learners among Implementing Schools in Region XII in terms of Skills in Life.

	Sum of Squares	df	Mean Square	F	p	Interpretation
DRU	0.52	2	0.26	0.44	0.65	Not Significant
Error	80.90	137	0.59			
Total	81.42	139				

## 5. CONCLUSION

The SPS learners were active, driven, and of a healthy weight. Also, SPS learners have a high level of 21st-century learning, literacy, and life skills, which means that for learners to have successful careers in the future, they will need to develop these skills inside and outside the classroom. Thus, the Special Program in Sports (SPS) curriculum shows minimal impact on learners' 21st-century competencies, with no significant association between Age and competencies. The curriculum teaches male and female learners the same skills, promoting equality and fostering a balanced environment. Maintaining gender-neutral practices in sports programs is crucial for maximizing student potential and empowering SPS learners to thrive in a diverse global landscape. Furthermore, Special sports programs in Region XII schools effectively nurture 21st-century skills, ensuring equitable academic, social, and athletic development opportunities for all learners.

## 6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

## 7. REFERENCES

- Alvarez-Dionisi, L. E. (2017). Envisioning skills for adopting, managing, and implementing big data technology in the 21st century. *International Journal of Information Technology and Computer Science*, 9(1), 18-25.
- Bessa, C., Hastie, P., Araújo, R., and Mesquita, I. (2019). What do we know about the development of personal and social skills within the sport education model: A systematic review. *Journal of Sports Science and Medicine*, 18(4), 812.
- Deci, E. L., and Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.
- Dohle, S., and Wansink, B. (2013). Fit in 50 years: Participation in high school sports best predicts one's physical activity after age 70. *BMC Public Health*, 13, 1-6.
- Dong, Y., Lau, P. W., Dong, B., Zou, Z., Yang, Y., Wen, B., Ma, Y., Hu, P., Song, Y., Ma, J., Sawyer, S. M., and Patton, G. C. (2019). Trends in physical fitness, growth, and nutritional status of Chinese children and adolescents: A retrospective analysis of 1.5 million students from six successive national surveys between 1985 and 2014. *The Lancet Child and Adolescent Health*, 3(12), 871-880.
- Foo, S., Majid, S., Mokhtar, I. A., Zhang, X., Chang, Y. K., Luyt, B., and Theng, Y. L. (2014). Information literacy skills of secondary school students in Singapore. *Aslib Journal of Information Management*, 66(1), 54-76.
- Jun, S., Edwin, C., Rahon, M., Ann, C., Terre, E. Q., Ventayen, D. B. A., and Urbano, J. M. (2021). Gendered-analysis on research competency of 21st century learners. *Journal of Contemporary Issues in Business and Government*, 27(1), 819-827.
- Kivunja, C. (2015). Teaching students to learn and to work well with 21st century skills: Unpacking the career and life skills domain of the new learning paradigm. *International Journal of Higher Education*, 4(1), 1-11.
- Pestano, R. D., and Ibarra, F. P. (2021). Assessment on the implementation of special program in sports and student-athletes performance in sports competition. *International Journal of Human Movement and Sports Sciences*, 9(4), 791-796.
- Revel, G. M., and Arnesano, M. (2014). Perception of the thermal environment in sports facilities through subjective approach. *Building and Environment*, 77, 12-19.
- Schover, L. R. (2019). Sexual quality of life in men and women after cancer. *Climacteric*, 22(6), 553-557.
- Tindowen, D. J. C., Bassig, J. M., and Cagurangan, J. A. (2017). Twenty-first-century skills of alternative learning system learners. *Sage Open*, 7(3), 2158244017726116.