THE UNIVERSITY OF LAHORE

IJPESS International Journal of Physical Education and Sports Sciences

Research Article

Volume 8, Issue 2, Jul-Dec 2024

Enhancing Basic Skills in Team Sports: A Video-Based Learning Approach in a Closed Facebook Group

Patrick John B. Roldan*

Department of Physical Education, Mariano Marcos State University, Philippines

*Corresponding Author's Email: pbroldan@mmsu.edu.ph

ABSTRACT

This study aimed to address the inconsistent availability of video demonstrations for basic skills in team sports (Baseball) by developing personalized video demonstrations and sharing them in a closed Facebook group. Conducted in the second semester of the 2021-2022 academic year, the study involved 50 Grade 11 students. An online survey gathered important background information, and a checklist was used to evaluate the intervention's accessibility, availability, and timeliness. Pre-tests and post-tests were administered to assess knowledge acquisition, while performance-based activities measured skill mastery. Frequency distribution and measures of central tendency described the data, and a t-test determined the significant difference between pre-test and post-test scores. The findings indicate that the intervention provided accessible, timely resources, enhancing students' knowledge acquisition and mastery of skills. The study concludes that personalized video demonstrations in the closed Facebook group effectively addressed the inconsistency and inconvenience of up-to-date video demonstrations for basic baseball skills.

Keywords: *Audio-Visual Learners, Individualized Learning, Skill Acquisition, Virtual Reality*

INTRODUCTION

Information that was once only understood by scholars and professionals can now be accessed by anyone, anywhere, in this information era. As our world becomes increasingly digitalized, individualized learning is becoming more accepted and easier to implement.

The challenges posed by the COVID-19 pandemic have highlighted inequities in digital access, showing that business as usual is not enough to ensure all children receive an education. The pandemic abruptly shifted the traditional educational system to virtual learning. Classrooms have turned into screened learning setups, with the digital world becoming the platform for fostering education and ensuring the convenience of accessing up-to-date information.

To bridge the digital divide in education and use technology to speed learning, alleviate learning poverty, and boost skill development, focus must be placed on bridging gaps in: i) digital infrastructure (connections, devices, and software); ii) human infrastructure (teacher capacity, student skills, and parental support); and iii) logistical and administrative mechanisms to deploy and maintain tech architecture (The World Bank, 2021). With the emergence of technology in education, Facebook (FB) has become one of the social media platforms used by teachers to manage instruction and learning. A study by Wang et al. (2012) found that most students were delighted with their Facebook learning experience.

As education evolves in the digital realm, students are becoming audio-visual learners. Hanzic (2021) stated that visual learning is eight times more effective than textual learning. Edgar Dale's cone of experience also indicates that learners likely retain 30% of information with the help of visual images. Visual learning aids in remembering information quickly and effectively. Teachers are becoming more creative in delivering lessons by integrating personalized videos to promote student-centered learning. Campbell and Cox (2018) found that personalized videos make students more flexible in generating, transmitting information, and learning. Additionally, they develop a sense of connection and work harder to ensure mutual understanding, fostering cooperation. Personalized videos offer numerous benefits, including easy access, the ability to pause and repeat, skip content, or review as needed. According to García-González et al. (2013), cognitive functions such as

DOI: https://doi.org/10.51846/the-sky.v8i2.3120 Received: 24-06-2024; Revised: 05-08-2024; Accepted: 30-08-2024

THE SKY-International Journal of Physical Education and Sports Sciences (IJPESS) (uol.edu.pk)

Published by: Department of Sports Sciences and Physical Education, Faculty of Allied Health Sciences, The University of Lahore, Pakistan.

directing attention, visual behavior, anticipation, response selection, decision-making, and execution or performance are influenced by knowledge. The study of motor learning and control provides a comprehensive approach to understanding human movement. Skill acquisition is an interdisciplinary science involving neuroscience, physiology, psychology, biomechanics, and coaching to study how the neuromuscular system activates and coordinates muscles and limbs to perform motor skills. Jeong and So (2020) found that the sudden shift to online classes left teachers unprepared and struggling with unfamiliar teaching methods, leading to trial-and-error approaches. Inadequate online teaching strategies and low readiness for online classes made the transition difficult. Even with various content (YouTube, Internet materials, etc.), it took significant time and effort to find videos and materials that matched the teaching content of physical education classes. Participants' principal concerns about online physical education classes centered on the lack of efficient content and difficulties in using it. Their study recommended the availability of media to capture and edit various physical activity photos and videos for online course preparation.

The researcher observed that both teachers and students struggled to locate online resources for performance-based outputs. This observation led to the formulation of the research problem. This paper aimed to address the inconvenience and inconsistent availability of up-to-date video demonstrations on basic skills in team sports (Baseball) by developing personalized video demonstrations and posting them to a closed Facebook group to ensure the intellectual property rights of the teacher. Roomie (2020) claimed that it is nearly impossible to find a modern teen whose life is not impacted by Facebook. With almost 2.7 billion users, Facebook is the most powerful social media site to date. Many people, regardless of age, have accounts on this site, including students. Students use Facebook for various purposes, ranging from entertainment to education. Facebook helps students in many ways.

In this paper, the researcher addresses the challenges of the New Normal in education. This study seeks to answer the following questions:

Q1: How do personalized video demonstrations posted in a closed Facebook group benefit students in terms of: a) accessibility b) availability c) timeliness

Q2: How do personalized video demonstrations posted in a closed Facebook group affect students' learning in terms of: a) knowledge acquisition b) mastery of skills

MATERIAL & METHODS

Technology's rapid improvement and affordability have led many fields to adopt Virtual Reality (VR) to train real-world skills. This study addressed the lack of up-to-date video demonstrations on basic skills in team sports (Baseball) by developing personalized video demonstrations posted to Facebook.

Participants

Purposive sampling was used to identify participants. This method was chosen to access a particular subset of people fitting a specific profile (Jordan, 2021). The total population purposive sampling approach was utilized, selecting the complete population with specific characteristics (Laerd, 2012). The primary sources were Grade 11 students of MMSU-LHS (Laoag Campus) taking Physical Education with the topic, Team Sports. All students in the two sections participated. Secondary sources included books, journals, dissertations, online references, related literature, and studies.

Procedure

The researcher sent approval and intent letters to the school administration, students' parents, and participants. Informed consent was obtained to ensure ethical guidelines were followed (Salkind, 2010). A pre-test determined the learners' existing knowledge of Baseball. After the intervention, a post-test assessed knowledge acquisition, and a performance-based activity evaluated skill mastery. As Bhat (2021) shown importance of online data collection, an online survey gathered background information and evaluated the intervention's accessibility, availability, and timeliness. Pre-tests and post-tests assessed knowledge acquisition, and performance-based activities evaluated skill mastery.

Statistical Analysis

Quantitative data analysis was used to analyze the collected data. Descriptive analysis addressed the research questions, providing a meaningful way to present data (Laerd Statistics, 2018; Trochim, 2021). Frequency distribution and measures of central tendency described the survey data and performance scores, as it was also suggested by (Corporate Finance Institute, 2021). The weighted mean was computed to strengthen the reliability of findings. The t-test determined the significant difference between pre-test and post-test scores, further investigating the improvement in students' knowledge acquisition (Investopedia, 2020).

RESULTS

Accessibility of Resources

The sudden shift in the educational system has caused significant problems related to the inaccessibility of resources for both teachers and learners. Limited video demonstrations of basic skills available on the internet prompted the researcher to investigate the effectiveness and efficiency of personalized video demonstrations.

The mean scores in Table 1 indicate that participants were very satisfied with the accessibility of the personalized video demonstrations in the FB closed group, highlighting its convenience, availability, and reliability as a learning resource.

Availability of Resources

The Table 2 shows mean scores indicate that participants were very satisfied with the availability of the personalized video demonstrations in the FB closed group, highlighting its efficiency, portability, and effectiveness in providing resources.

Timeliness of Resources

The Table 3 presents the participants' satisfaction with the timeliness of personalized video demonstrations posted in the FB closed group. the mean scores indicate that participants were very satisfied with the timeliness of the personalized video demonstrations in the FB closed group, highlighting its effectiveness in providing current and accurate execution of basic skills.

Table 1. Mean Scores of the Accessibility of Resources

Indicator	Mean	Descriptive Interpretation
The personalized video demonstration posted in FB closed group provides more convenience rather than simply browsing the wide internet.	4.60	Very Satisfied
The personalized video demonstration posted in FB closed group is accessible any time.	4.76	Very Satisfied
The personalized video demonstration posted in FB closed group bridges the gaps in finding credible resources online.	4.78	Very Satisfied
The personalized video demonstration posted in FB closed group saves time for executing the basic skills rather than browsing the internet.	4.76	Very Satisfied
The personalized video demonstration posted in FB closed group provides an avenue in accessing reliable reference in the execution of the basic skills.	4.62	Very Satisfied
Composite Mean	4.70	Very Satisfied

Table 2. Mean Scores of the Availability of Resources

Indicator	Mean	Descriptive Interpretation
The personalized video demonstration posted in FB closed group minimizes time consumption in finding resources.	4.60	Very Satisfied
The personalized video demonstration posted in FB closed group is available and portable anywhere I go.	4.76	Very Satisfied
There are limited resources online that execute the different basic skills.	4.78	Very Satisfied
Composite Mean	4.75	Very Satisfied

Table 3. Mean Scores of Timeliness of Resources

Indicator	Mean	Descriptive Interpretation
The personalized video demonstration posted in FB closed group provides up-to-date execution of the basic skills.	4.68	Very Satisfied
The personalized video demonstration posted in FB closed group eradicates the wrong execution of the different basic skills posted in different media platforms.	4.76	Very Satisfied
Composite Mean	4.72	Very Satisfied

Acquisition of Knowledge

The researcher utilized personalized video demonstrations posted in the FB closed group as an intervention to boost learners' knowledge acquisition. Videos create opportunities for in-depth learning by presenting various data such as images, movement, and sound together. This allows learning to occur at individual paces and ensures control over the reception of information.

The table 4 presents the pre-test and post-test scores of the participants, highlighting the effectiveness of the personalized video demonstrations in enhancing knowledge acquisition. The mean scores indicate a significant improvement in participants' knowledge acquisition, as evidenced by the higher post-test scores compared to the pre-test scores. The p-value of 0.001* suggests that the difference between the pre-test and post-test scores is statistically significant.

Table 4. Pre-test and Posttest Scores of the Participants

	Mean	SD	Mean Difference	t-test	p-value
Pre-test	11.68	5.0376			
			0.37540	-17.3149	0.001*
Posttest	18.18	1.8676			

Mastery of Skills

The researcher utilized personalized video demonstrations posted in the FB closed group as an intervention to boost learners' mastery of skills. Through video practices, learners master real objects and movement sequences by observation, providing opportunities for in-depth learning.

The table 5 presents the performance task results of the participants, highlighting the effectiveness of the personalized video demonstrations in boosting the mastery of skills. The results indicate that all participants achieved a high degree of effectiveness in their performance tasks, demonstrating the positive impact of personalized video demonstrations on mastering the basic skills.

Table 5. Result of the Performance Task of the Participants

Range of Scores	Descriptive Interpretation	f	%
22 – 28	High Degree of Effectiveness	50	100
15 - 21	Considerable Effectiveness	-	-
8 - 14	Moderate Effectiveness	-	-
1 - 7	Limited Effectiveness	-	-
Summation of Scores		1290	100
		Mean: 25.8	

DISCUSSION

According to Levy (2007), growing trend is observed, especially in among youths to watch videos broadcasted in social networking sites (YouTube, Twitter, and Facebook) and to communicate via social networks. The results from Table 1 indicate that the personalized video demonstration posted in the FB closed group provided significant convenience for students compared to browsing the wide internet. With a weighted mean of 4.60, the students expressed being Very Satisfied. The videos were accessible anytime, with a weighted mean of 4.76, and bridged gaps in finding credible resources online, with a weighted mean of 4.78, both rated as Very Satisfied. Additionally, the videos saved time in executing basic skills rather than browsing the internet, with a weighted mean of 4.76, and provided reliable reference access with a weighted mean of 4.62. The composite mean of 4.70 confirms that the personalized video demonstration effectively provided accessibility

of resources to the study participants. As shown in Table 2, the personalized video demonstration minimized time consumption in finding resources, with a weighted mean of 4.60, rated as Very Satisfied. The videos were available and portable anywhere, with a weighted mean of 4.76, and were among the limited resources online executing basic skills, with a weighted mean of 4.78. The composite mean of 4.75 indicates that the personalized video demonstration effectively provided availability of resources to the participants.

Table 3 reveals that the personalized video demonstration provided up-to-date execution of basic skills, with a weighted mean of 4.68, rated as Very Satisfied. The videos also eradicated incorrect execution of basic skills found on other media platforms, with a weighted mean of 4.78, rated as Very Satisfied. The composite mean of 4.72 confirms that the personalized video demonstration effectively provided timely resources to the participants.

From Table 4, it is evident that there was an improvement in knowledge acquisition, as indicated by the increase in mean scores from the pre-test (11.68) to the post-test (18.18). The t-test value suggests a significant difference between pre-test and post-test mean scores at $\alpha=0.05$, confirming that the personalized video demonstration boosted participants' knowledge acquisition.

Lastly, Table 5 shows an improvement in skill mastery, with a mean score of 25.8. This indicates a High Degree of Effectiveness in executing the basic skills of Baseball. Thus, the personalized video demonstration effectively boosted participants' mastery of skills.

CONCLUSION

The personalized video demonstration posted in a Facebook closed group has proven to be an effective educational tool in enhancing the learning experience for students. The study revealed that the video demonstrations significantly improved the accessibility, availability, and timeliness of resources, providing students with a convenient and reliable reference for executing basic skills in baseball.

The intervention led to a notable increase in knowledge acquisition, as evidenced by the significant improvement in post-test scores compared to pre-test scores. Furthermore, the personalized video demonstrations facilitated a high degree of skill mastery, ensuring that students could accurately execute the basic skills of baseball.

Overall, the personalized video demonstrations not only addressed the challenges posed by the sudden shift in the educational system but also provided a modern and efficient way to support students' learning and skill development. This approach can be beneficial for educators looking to enhance their teaching methods and provide more engaging and accessible learning resources.

DECLARATION

Authors' Contribution Statement: Patrick John B. Roldan is the sole author of this paper and was responsible for the conceptualization, design, data collection, analysis, and writing of the manuscript.

Ethical statement: This research adheres to the ethical guidelines established by the Committee on Publication Ethics (COPE). All procedures and methodologies used in this study comply with COPE standards, ensuring transparency, integrity, and respect for all participants involved.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Conflict of Interest: The author declare no conflict of interest.

REFERENCES

Bhat, A. (2021). *Online Surveys: What are they, advantages & examples.* Retrieved on December 16, 2021 from https://www.questionpro.com/blog/what-are-online-surveys/

Corporate Finance Institute. (2021). *Central Tendency*. Retrieved on December 13, 2021 from https://corporatefinanceinstitute.com/resources/knowledge/other/central-tendency/

García-González, L., Moreno, P., Moreno, A., Gil, A., and del Villar, F. (2013). Effectiveness of a Video-Feedback and Questioning Programme to Develop Cognitive Expertise in Sport. *Polos.* https://doi.org/10.1371/journal.pone.0082270

Hanzic, L. (2021). *3 Fact About Personalized Video in Personalized Learning.* Retrieved on December 10, 2021 from https://www.covideo.com/3-facts-about-personalized-video-in-personalized-learning/

Jeong, H., and So, W. (2020). *Difficulties of Online Physical Education Classes in Middle and High School and an Efficient Operation Plan to Address Them.* Retrieved on December 10, 2021 from https://www.mdpi.com/1660-4601/17/19/7279/pdf

Jordan, M. (2021, August 26). *Purposive Sampling 101*. Retrieved on December 12, 2021 from https://www.alchemer.com/resources/blog/purposive-sampling-101/

Laerd Dissertation. (2012). *Purposive Sampling.* Retrieved on December 12, 2021 from https://dissertation.laerd.com/purposive-sampling.php#total

Laerd Statistics. (2018). *Measure of Central Tendency.* Retrieved on December 12, 2021 from https://statistics.laerd.com/statistical-guides/measures-central-tendency-mean-mode-median.php

Levy, S. (2007). *Are MySpace users now spacing out?* Newsweek, 149, (22), p.26; Ronn, K. Social Networking: Closer Thank You Think. Business Week Online, 12, 2007

Roomi,, (2020). *5 Advantages and Disadvantages of Facebook for Students | Drawbacks & Benefits of Facebook for Students.* Retrieved on December 09, 2021 from https://www.hitechwhizz.com/2020/12/5-advantages-and-disadvantages-drawbacks-benefits-of-facebook-for-students.html

Salkind, N. (2010). *Informed Consent.* Retrieved on December 12, 2021 from https://methods.sagepub.com/reference/encyc-of-research-design/n188.xml

The World Bank. (2021). *Digital Technologies in Education.* Retrieved on December 12, 2021 from https://www.worldbank.org/en/topic/edutech#1

Trochim, W. (2021). *Descriptive Statistics.* Retrieved on December 12, 2021 from https://conjointly.com/kb/descriptive-statistics/

Wang, Q., Woo, H. L., Quek, C. L., Yang, Y., and Liu, M. (2012). Using the Facebook group as a learning management system: An exploratory study. *British Journal of Educational Technology*, 43, 428-438.

Cite this paper as:

Roldan, P. J. (2024). Enhancing Basic Skills in Team Sports: A Video-Based Learning Approach in a Closed Facebook Group. *THE SKY-International Journal of Physical Education and Sports Sciences*, 8(2), 72-77