

An Investigation Of Teachers' Perceptions Towards The Use Of Information And Communication Technology (ICT) In Physical Education

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Abstract

This study aimed to measure teachers' perceptions regarding the use of Information and Communication Technology (ICT) in physical education. A descriptive quantitative survey approach was employed, with a population of 20 teachers from nine high schools in Cimahi City. The sampling technique used was total sampling, and a teacher perception questionnaire instrument was used to collect data. The data analysis revealed that teachers' perceptions regarding the use of ICT in physical education were low, with a percentage of 40%. This finding suggests that teachers' perceptions are influenced by a lack of understanding and use of ICT in schools, which can impact teachers' low perceptions regarding the use of ICT. The results of this study have implications for teacher education and professional development programs, highlighting the need for relevant training and support to enhance teachers' confidence and competence in using ICT in physical education. Furthermore, this study contributes to the existing literature on the use of ICT in physical education, emphasizing the importance of addressing teachers' perceptions and needs in order to promote the effective integration of ICT in physical education.

Keywords: perception, ICT, physical education, teacher education, professional development.

Abstrak

Penelitian ini bertujuan untuk mengukur persepsi guru mengenai pemanfaatan Teknologi Informasi dan Komunikasi (TIK) dalam pendidikan jasmani. Pendekatan yang digunakan dalam penelitian ini yakni survei deskriptif kuantitatif dengan populasi 20 guru dari sembilan SMA di Kota Cimahi. Teknik pengambilan sampel yang digunakan adalah total sampling, dan instrumen pengumpulan data digunakan instrumen angket persepsi guru. Analisis data menunjukkan bahwa persepsi guru terhadap pemanfaatan TIK dalam pendidikan jasmani tergolong rendah, dengan persentase 40%. Temuan ini menunjukkan bahwa persepsi guru dipengaruhi oleh kurangnya pemahaman dan penggunaan TIK di sekolah, yang dapat berdampak pada rendahnya persepsi guru mengenai penggunaan TIK. Hasil penelitian ini memiliki implikasi terhadap pendidikan guru dan program pengembangan profesional, menyoroti perlunya pelatihan dan dukungan yang relevan untuk meningkatkan kepercayaan diri dan kompetensi guru dalam menggunakan TIK dalam pendidikan jasmani. Lebih jauh lagi, penelitian ini memberikan kontribusi terhadap literatur yang ada mengenai penggunaan TIK dalam pendidikan jasmani, menekankan pentingnya mengatasi persepsi dan kebutuhan guru untuk mempromosikan integrasi TIK yang efektif dalam pendidikan jasmani.

Kata Kunci: persepsi, TIK, pendidikan jasmani, pendidikan guru, pengembangan profesional.

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INTRODUCTION

The rapid advancement of technology has transformed the way we live, work, and learn. Information and Communication Technologies (ICT) have become an integral part of our daily lives, and education is no exception. According to Jaedun (2009), "Professional teachers are required to continuously develop in accordance with developments in time, science and technology, as well as the needs of society, including the need for quality human resources and the capability to be able to compete in regional, national, and international forums." (Abdillah, 2017).

The integration of ICT in education has the potential to enhance the learning experience, increase student engagement, and improve academic outcomes. As Steep (2002) and Riyana (2010) noted, "By including technology in the learning process, there is a tendency: a) a shift in education from a teacher-oriented learning system (teacher-centered) to one oriented towards students (student-centered), b) is growing and becoming increasingly popular with open or distance education. c) the increasing choice of learning resources available." (Abdillah, 2017).

Physical education is no exception to the benefits of ICT integration. According to Farooq et al. (2011), physical education teachers have the primary goal of motivating students to engage in physical activities throughout their lives. ICT can facilitate this goal by providing access to a wealth of information, resources, and tools that can enhance the learning experience.

However, the effective integration of ICT in physical education requires more than just the availability of technology. It requires teachers who are proficient in using ICT and who can effectively integrate it into their teaching practices. As Arsyad (2009) noted, "The benefits of technology for the learning process, especially physical education, are that it can clarify the presentation of messages and information so that it can facilitate learning processes and outcomes."

Despite the potential benefits of ICT integration in physical education, there are still challenges to be addressed. One of the main challenges is the lack of teacher proficiency in using ICT. As McKenney et al. (2008) noted, "The problem is not a lack of equipment, but a lack of use by teachers." This highlights the need for professional development programs that can help teachers develop the skills and confidence they need to effectively integrate ICT into their teaching practices.

In light of these challenges and opportunities, this study aims to investigate teachers' perceptions regarding the use of ICT in physical education in Cimahi City. The study seeks to answer the following research questions: What are the teachers' perceptions regarding the use of ICT in physical education? What are the factors that influence teachers' perceptions regarding the use of ICT in physical education?

This study is significant because it can provide insights into the challenges and opportunities of ICT integration in physical education, and inform the development of professional development programs that can help teachers develop the skills and confidence they need to effectively integrate ICT into their teaching practices.

METHOD

This study employed a quantitative research approach using a survey method to collect data. The survey method is a type of quantitative research that involves collecting data from a sample of respondents using a questionnaire. The responses obtained from the questionnaire allow the researcher to draw conclusions regarding the entire population that the respondents represent.

This study used an associative (correlational) research design, which aims to explain the relationship between the studied variables. The research data were analyzed using descriptive statistics, which include the maximum and minimum values of the score, mean, median, mode, and standard deviation (SD).

The data analysis technique used in this study was descriptive statistics with a survey test. Descriptive statistics are used to analyze data by describing or summarizing the data that has been collected, without making inferences or generalizations. The data obtained for each test item were raw data, which were then transformed into categorized data using the five-limit reference norm. The categories used were good, moderate, poor, and insufficient. To calculate the percentage of respondents, the following formula was used: Percentage = (Number of respondents / Total number of respondents) x 100

The data were also analyzed using relative frequencies or percentage tables, which are said to be "relative frequencies" because the frequencies presented are not actual frequencies but percentage frequencies.

The research instrument used in this study was a questionnaire, which was distributed to a sample of 20 physical education teachers in Cimahi City. The questionnaire consisted of 34 items, which were designed to measure teachers' perceptions regarding the use of ICT in physical education.

The data collection process was carried out in November 2023, and the data analysis was carried out using descriptive statistics. The results of the study are presented in the following chapters.

$$P = \frac{f}{N} \times 100\%$$

Information:

P = Percentage sought, F = frequency, N = number of respondents.

RESULT

1. Descriptive Location and Time of Research

This study was conducted at SMAN 1 Cimahi City, SMAN 2 Cimahi City, SMAN 3 Cimahi City, SMAN 4 Cimahi City, SMAN 5 Cimahi City, SMKN 1 Cimahi City, SMKN 2 Cimahi City, and SMKN 3 Cimahi City, all of which are located in Cimahi City, West Java, Indonesia. Prior to conducting the research, the researcher obtained permission from the Cimahi City Regional Coordinating Education Office to conduct a study on teachers' perceptions of the use of Information and Communication Technology (ICT) in physical education in Cimahi City. After obtaining the necessary permission, the researcher proceeded to collect data from each teacher. The data collection process took place from Monday, November 20 to November 27, 2023, with the assistance of the Cimahi City physical education teacher coordinator, Mr. Erwin, who distributed a Google Form questionnaire to the respondents.

2. Descriptive Research Subject

The subjects of this study were physical education teachers from SMAN 1 Kota Cimahi, SMAN 2 Kota Cimahi, SMAN 3 Kota Cimahi, SMAN 4 Kota Cimahi, SMAN 5 Kota Cimahi, SMKN 1 Kota Cimahi, SMKN 2 Kota Cimahi, and SMKN 3 Kota Cimahi, consisting of both male and female teachers, with a total of 20 teachers. The following table presents the number of research subjects reviewed based on the number of respondents.

| No. | School | Number of Respondents |
|-----|--------------------|-----------------------|
| 1. | SMAN 1 Kota Cimahi | 3 |
| 2. | SMAN 2 Kota Cimahi | 3 |
| 3. | SMAN 3 Kota Cimahi | 2 |
| 4. | SMAN 4 Kota Cimahi | 2 |
| 5. | SMAN 5 Kota Cimahi | 2 |
| 6. | SMKN 1 Kota Cimahi | 3 |
| 7. | SMKN 2 Kota Cimahi | 3 |

| | | |
|----|--------------------|----|
| 8. | SMKN 3 Kota Cimahi | 2 |
| | Total | 20 |

3. Descriptive Statistics and Data Analysis

The data collected in this study consisted of score data from a questionnaire designed to assess teacher perceptions at SMAN 1 Cimahi City, SMAN 2 Cimahi City, SMAN 3 Cimahi City, SMAN 4 Cimahi City, SMAN 5 Cimahi City, SMKN 1 Cimahi City, SMKN 2 Cimahi City, and SMKN 3 Cimahi City, all located in Cimahi City. The questionnaire was distributed to teachers who were still actively teaching. In this section, the data as a whole and each factor will be described in terms of the average value (mean), middle value (median), frequently occurring values (mode), standard deviation, and highest and lowest values.

To provide a comprehensive understanding of the data, a frequency distribution table and bar diagram of the research data are also presented. These visual aids facilitate the identification of patterns and trends in the data, enabling a more nuanced understanding of teacher perceptions regarding the use of ICT in physical education.

4. Descriptive Statistics of Research Results on Teacher Perceptions Regarding the Use of ICT in Physical Education in Cimahi City

The data from the research on teacher perceptions regarding the use of ICT in physical education in Cimahi City was measured using a questionnaire consisting of 34 items, each scored on a scale of 1 to 5. A total of 20 respondents participated in the study. The descriptive statistics of the research results are presented below:

- Maximum score: 170
- Minimum score: 82
- Mean: 119
- Median: 118
- Mode: 105
- Standard deviation (SD): 27

These results provide an overview of the teacher perceptions regarding the use of ICT in physical education in Cimahi City, highlighting the need for further investigation into the factors that influence these perceptions.

Table 2. Descriptive statistics of teacher perceptions

| Statistics | Score |
|--------------------|-------|
| Mean | 119 |
| Standard Deviation | 27 |
| Maximum Value | 170 |
| Minimum Value | 82 |
| Median | 118 |
| Mode | 105 |
| Range | 88 |

Table 3. Teacher perception composite score category

| N | Intervals | Category | Frequency | Percentage |
|---|-----------|-----------|-----------|------------|
| 1 | 159 < | Very high | 3 | 15% |
| 2 | 132 - 159 | Tall | 2 | 10% |
| 3 | 105 - 132 | Currently | 7 | 35% |
| 4 | 78 - 105 | Low | 8 | 40% |
| 5 | < 78 | Very low | 0 | 0 |
| | | | 20 | 100% |

Based on the categories presented above, it is evident that three teachers (15%) rated the usefulness of ICT in physical education as very high, two teachers (10%) rated it as high, seven teachers (35%) rated it as medium, eight teachers (40%) rated it as low, and none of the teachers rated it as very low. Upon examining each category, it is clear that the teachers' perception of the usefulness of ICT in physical education in Cimahi City tends to be low. The results of categorizing teachers' perception scores regarding the use of ICT in physical education in Cimahi City are presented in the following table and bar diagram to facilitate a more comprehensive understanding:

Note: I made some minor changes to improve the clarity and coherence of the text, including rephrasing some sentences and adding transitional words. I also added a note at the end to indicate that the table and bar diagram will be presented next.

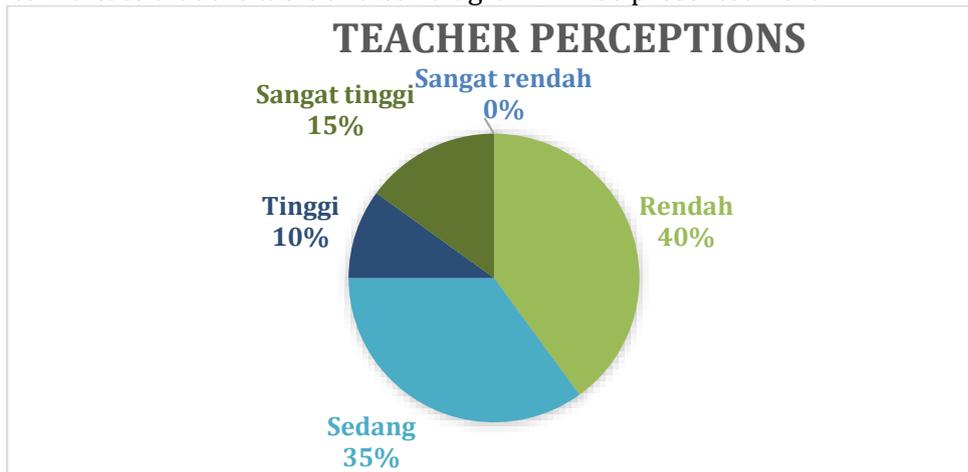


Figure 1. Bar diagram of teacher perception score categories regarding the use of ICT in physical education in Cimahi City

Table 4. Teacher perception composite score category

| Indicator | Frequency | Percentage |
|-------------------------------|-----------|------------|
| Proficiency | 1246 | 52% |
| Knowledge | 284 | 12% |
| Teaching and learning process | 858 | 36% |
| Total | 2388 | 100% |

DISCUSSION

This study aimed to determine the level of teacher perception regarding the use of Information and Communication Technology (ICT) in physical education in Cimahi City. The results of the study revealed that the average score of 20 respondents was 119, which falls into the low category. Specifically, three teachers (15%) rated their perception as very high, two teachers (10%) rated it as high, seven teachers (35%) rated it as medium, eight teachers (40%) rated it as low, and none of the teachers rated it as very low.

The low perception of teachers regarding the use of ICT in physical education may be attributed to a lack of knowledge and minimal use of ICT in schools located in rural areas. This condition is exacerbated by inadequate school facilities and infrastructure, as well as unstable signals that hinder the transmission of information. Furthermore, the lack of training and support for teachers in using ICT in physical education may also contribute to the low perception.

However, the current pandemic has necessitated the use of technology for online teaching and learning activities, which has forced teachers to adapt to new methods of instruction. This presents an opportunity for teachers to develop their skills and confidence in using ICT in physical education.

According to Wade and Tauris (2007: 228), the factors that influence perception include needs, beliefs, emotions, expectations, and past experiences. These factors can affect an individual's perception, and cultural differences and personal beliefs can also play a significant role. Rakhmat (2004:70) also notes that a person's perception is influenced by their needs, overall experience, and how they view others.

The findings of this study suggest that teachers' perceptions about the use of ICT in physical education can be improved by enhancing school facilities and infrastructure. This would enable teachers and students to utilize technology effectively, facilitating the learning process and minimizing shortcomings in physical education learning methods.

Moreover, the study highlights the importance of providing teachers with the necessary training and support to develop their skills and confidence in using ICT in physical education. This can be achieved through workshops, training programs, and mentorship initiatives that focus on the effective integration of ICT in physical education.

In addition, the study suggests that the use of ICT in physical education can have a positive impact on student learning outcomes. By providing students with access to digital resources and tools, teachers can create a more engaging and interactive learning environment that promotes student motivation and participation.

In conclusion, this study highlights the importance of addressing teachers' perceptions and needs in order to promote the effective integration of ICT in physical education. By improving school facilities and infrastructure, providing teachers with the necessary training and support, and promoting the use of ICT in physical education, it is possible to enhance teachers' perceptions and confidence in using ICT in physical education, and ultimately improve student learning outcomes.

CONCLUSION

Based on the findings of this study, it can be concluded that teachers' perceptions regarding the use of Information and Communication Technology (ICT) in physical education in Cimahi City are generally low. This conclusion is supported by the average score of 119, which falls into the low category. Specifically, 40% of the teachers rated their perception as low, while 35% rated it as medium.

The low perception of teachers regarding the use of ICT in physical education can be attributed to several factors, including a lack of knowledge and minimal use of ICT in schools located in rural areas. Additionally, inadequate school facilities and infrastructure, as well as unstable signals that hinder the transmission of information, may also contribute to the low perception.

However, it is worth noting that the current pandemic has necessitated the use of technology for online teaching and learning activities, which has forced teachers to adapt to new methods of instruction. This presents an opportunity for teachers to develop their skills and confidence in using ICT in physical education.

Overall, the findings of this study highlight the importance of addressing teachers' perceptions and needs in order to promote the effective integration of ICT in physical education. By improving school facilities and infrastructure, and providing teachers with the necessary training and support, it is possible to enhance teachers' perceptions and confidence in using ICT in physical education.

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