

PE Teachers Instructional Performance as Basis for Competencies Program Enhancement

Lang Zhao

Adamson University, Manila, 1000, Philippines

925022781@QQ.COM

Abstract

This study utilized a descriptive comparative analysis to compare PE Teachers' self-assessment and PE Coordinators' assessment results. Findings show that both groups rated "Planning of the Lesson" as the most successful aspect, while "Assessment of Learning" was the weakest. Although there were minor discrepancies, no significant difference existed in the evaluations of lesson planning, but considerable variations were found in lesson delivery, teaching strategies, and learning assessment. Consequently, it was deduced that teachers need to improve their skills in designing and implementing varied assessment strategies to improve their overall performance. The study recommends increasing awareness about teaching improvement among PE Teachers and ensuring the adaptation and implementation of the Reform of teacher education in China. It also suggests that the College of Physical Education or the Physical Education Association of China should establish professional standards, certification procedures, and provide workshops on teaching pedagogy, curriculum planning, and teaching assessment.

Keywords

PE Teachers, Instructional Performance, Competencies.

1. Introduction

Yen 2004, The Chinese education system is the largest in the world with approximately 600,000 schools in its primary education system where over 200,000,000 students are educated. Since the early 1980s China has undergone a major education boom reform that aims to better prepare students for the social changes that have occurred and are occurring throughout China. This reform involves reconceptualization of the main goals of the education system, including a review of the ways it is managed and administered, and more recently, an overhaul of the national curriculum was undertaken.

Teachers' instructional performance in teaching need to assess for an effective means to build a high-quality teaching team, ensure "good teaching" for students, and ultimately promote efficient and sustainable professional development of teachers. Through the analysis of literature, interview and Delphi method, this paper sorts out the research results and discovery rules of the evaluation of College Physical Education Teachers in Nanjing, explores the current situation and future trend of the teaching evaluation of physical education teachers in China, and then provides references for the construction of excellent physical education teachers in China.

2. Organization of the Text

2.1. Problems and Settings

2.1.1. Background of the Study

Although the new Chinese National Curriculum Standard consists of 18 subjects that include PE and PE has maintained a strong place in the Chinese curriculum. After being aligned within the reforms associated with the establishment of 'New China', in 1949. Based on its close connections with the Soviet Union, PE programs, since 1949, have focused heavily on the development and demonstration of physical skills and discipline. At this time the main content areas of the PE curriculum were gymnastic, track and field, basketball, football, and volleyball. The evaluation system set up around PE is heavily weighted towards the achievement and recognition of physical excellence. Within this orientation, it was observed that although the student was able to hone and heal to run the fastest, jump the highest, balance the longest and farthest. At this time, pre-service teacher training programs did not pay much attention to observing their teaching. All are focused on imparting pedagogic content knowledge, which expresses the teacher's expertise (Schulman 1986). In this context, teachers were encouraged to specialize in one or two sports. Areas of specialization are usually determined by the teacher's own performance history in their chosen sport.

The study of the researcher is very significant for PE teachers to assess the strength and weakness in instructional ability to further improve the competencies program of the said subject or course especially in universities.

2.1.2. Statement of problems:

The purpose of the study aims to determine the instructional performance PE Teachers in selected universities of Nanjang City of China.

Specifically, the study will be sought to answer the following problems:

What is the assessment of teachers' respondents to the instructional performance of PE teachers in their teaching in terms of the following:

Planning of the Lesson

Delivery of the Lesson

Teaching Pedagogy and Strategies

Assessment of Learning

What is the assessment of Physical Education coordinators' respondents to the instructional performance of PE teachers in their teaching in terms of the following:

Planning of the Lesson

Delivery of the Lesson

Teaching Pedagogy and Strategies

Assessment of Learning

Is there any significant difference in the assessment of the teachers' respondents' and administrators' respondents' assessment in the instructional performance in teaching Physical Education in terms of the following:

Planning of the Lesson

Delivery of the Lesson

Teaching Pedagogy and Strategies

Assessment of Learning

What development competency program can be proposed from the findings of the study?

Significance of the study:

This study will benefit to the following:

Ministry of Education of China

This study will be served as reference in enhancing the training for improvement of Curriculum in Physical Education.

Nanjing Institute of China

This study will be served as a big picture on the methods and practices executed by the PE teachers that could influence their academic decisions in instructional management.

2.1.3. PE Coordinators

This study will be served as head teachers that monitor and supervised PE teachers in different sports like badminton, soccer, basketball, etc. to improve the best practices and time-tested strategies/ techniques in instructions be implemented more efficiently and effectively.

2.1.4. University PE Teachers

This study will be served as reference for the formulation of various methods and approaches in helping the students acquire learning effectively.

2.1.5. PE Students

This study will be served to provide vital information for the teachers in planning for the instructional effectively and efficiently, and thus, benefit the students.

2.1.6. Scope and Delimitation of the Study

This study will determine the instructional performance of PE teachers in Nanjing Institute of China through the assessment of their skills in teaching for the four (4) components process such as Planning of the Lesson, Delivery of the Lesson and Assessment of Learning.

Although, the institution offered many courses across disciplines of program like engineering, arts, medicine, etc... But he scopes and the limitation of this study focuses on the self assessment of PE teachers teaching general Physical education courses in Nanjing Institute of China including the assessment of their PE coordinators to the instructional performance of PE teachers to their teaching. The result of the low competencies will be the basis for producing the output in order to carry out the enhancement of the competencies program of Physical Education.

3. Review of Related Literature and Framework

3.1. Planning of the Lesson

EDUCAUSE 2005, when planning learning activities, you should consider the types of activities students will need to engage in, in order to develop the skills and knowledge required to demonstrate effective learning in the course. Learning activities should be directly related to the learning objectives of the course, and provide experiences that will enable students to engage in, practice, and gain feedback on specific progress towards those objectives.

Many activities can be used to engage learners. The activity types (i.e. what the student is doing) and their examples provided below are by no means an exhaustive list, but will help you in thinking through how best to design and deliver high impact learning experiences for your students in a typical lesson.

3.2. Delivery of the Lesson

Some of the best presentations in delivering lesson in Physical education probably recognize the fundamental aspects that distinguish an engaging delivery from a less engaging one. These can be summed up as presentation and discussion of the important topics of the lesson, and include the facilitators' speaking voice and body language, how they move around the space, and their overall demeanor. As each of these skills is discussed in more detail, keep in mind that the advice and tips must be understood within the logistical context of the instruction

session. PE teachers are more likely to be presenting to a group of 10 workshop attendees or a classroom of 20 or 30 students than to an auditorium of hundreds. Similarly, teaching tends to involve more interaction between the instructor and student than, say, a keynote address, which typically is delivered as a lecture or performance. While we rely on many of the same techniques, the delivery will be different in each situation. In a workshop in a classroom or in any facilities, move around and make direct eye contact with learners but will probably have to rely on our natural voice projection to be heard. During a large lecture we might have a microphone to ensure we can be heard, but we might also have to stand behind a podium to access the microphone. The key is to be aware of your space, make use of its opportunities, and adapt to its limitations.

3.3. Teaching Pedagogy and Strategies

Teaching pedagogy and strategies can encompass general behavior and demeanor, such as whether instructors are friendly or stern, as well as their preferred instructional strategies, such as whether they are more inclined to lecture or use active learning techniques. Teaching style is more than just personality; it seems to be related to instructors' philosophy of teaching (Atasoy et al., 2018; Saritas, 2016) and might also be influenced by their own confidence or feelings of self-efficacy in the classroom (González et al., 2018; Zhang et al., 2019). Teachers' teaching strategies are an expression of how they view their role in the classroom and their relationship to their learners. All of us have encountered a variety of teaching styles as students, and each style has probably evoked a different response or influenced our overall learning experience. Research suggests that a teacher's teaching style can impact student learning and motivation (Bolkan & Griffin, 2017; De Meyer et al., 2014). Different teaching styles will suit different instructors, audiences, and formats. We should explore various teaching styles to discover which style or combination of styles feels most authentic to us and allows us to engage with students with the most confidence.

3.4. Assessment of Learning

Research on the evaluation theory of Physical Education Teachers. According to the existing research literature, the research on the basic theory of PE teacher evaluation is mainly about the concept, subject and object, principle, function, purpose, value orientation of PE teacher evaluation, Dangui, Yingjie, Xianfeng, Jinku, Wei and Yingjie 2007 and other scholars believe that the construction of the evaluation standard for physical education teachers should follow the following principles: "reflect the contemporary management concept, pay attention to the development of teachers' personality, and combine quantitative evaluation with qualitative evaluation, Wei, Chao, and Guo 2013, comprehensively and thoroughly summarized and analyzed the previous evaluation work and related research of physical education teachers in colleges and universities in China from the aspects of evaluation thought, subject and object, indicators and standards, tools and methods, The corresponding suggestions are put forward from the aspects of changing ideas, updating research paradigms and improving research methods. Yuantang 2006, believes that efficient and high-quality physical education teaching is the main embodiment of the construction of the characteristics and level of physical education colleges and universities, and scientific and reasonable evaluation of physical education teachers will help to realize the scientization and efficiency improvement of school management.

4. Methodology

4.1. Research Design

The methods of this study will use quantitative research. The reasearcher will use a descriptive comparative analysis to describe and compare the self assessment of teachers' result and assessment of coordinators' result if their answers are related or not.

4.2. Sampling Method

Table 1 shows the distribution of the respondents' sample from the different PE coordinators of different sports and PE Teachers. The minimum sample size that is statistically reliable for the study is thirty (30) PE Coordinators and fifty (50) PE Teachers across discipline of sports with a total of eighty (80) respondents. The sample size is determined using a sample calculator provided by www.socscistatistics.com. The 80 respondnets were randomly sampled from each dicpilineof sports proportionately. Table 1 shows the distribution of the respondents.

PE major sports	Number of Coordinator	Number of PE Teachers
Basketball	4	6
Football	4	6
Table tennis (small ball)	6	10
Dance sports	4	6
yoga	3	6
Cheerdance	3	6
Traditional ethnic sports	6	10
TOTAL	30	50

4.3. Respondents of the Study

This study will consist of fifty (50) PE teachers and thirty (30) 30 PE coordinators from the Nanjing Institute of China.

The respondents' selection will be based on the specialization of the teachers and students. The participation of the higher education institution will be considered based on a large population, where the school is also recognized in China, as performing institution that offer sports educations. The respondents who will be participated in this undertaking sudy are all connected in the aforementioned institution. Their participation in the study would be significantly impact the results of the study.

4.4. Research Instrument Used

The researcher will utilize a survey questionnaire as the main instrument in gathering data for the quantitative component of the study. For the participants to have a complete understanding and appreciation of the questions indicated in the survey questionnaire, the research will employe the translation method from the English language to the Chinese language. This process provided clarity of the questions and so to gather the exact data intended for this purpose.

The survey has 5 items per each component on a five-point self-rating response scale 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; and 5 =Strongly Agree.

4.5. Validation and Reliability of the Questionnaire

The researcher adopted the instrument of CSTP (2018) about the Teacher Leadership Skills Framework developed by the Center for Strengthening the Teaching Profession who created the Physical Education Teaching Efficacy and in the Philippine Standards for Professional Teachers (PPST). The researcher crafted the survey tool to used in this study from these two instruments.

The overall reliability of the questionnaire will be obtained Cronbach's Alpha =0.871 showing a relatively consistent result for all of the items. The reliability test result indicated that the research instrument was statistically reliable.

4.6. Data Gathering Procedure

The researcher will be first secured permission from the participating higher education institution to allow target participants to participate in the survey.

According to the narrative provided, the Chinese language responses of the respondents will be translated into English and carefully decode and interpreted by the narratives provided.

4.7. Data Analysis Procedure

In the final stage of analysis, the constant comparative technique will be used to form the synthesize description of the demographic profile, PE teachers' instructional leadership practices, and their assessment on self-efficacy, representing a synthesis of consistent themes and categories derived from participants' descriptions. The primary means for establishing internal validity is the triangulation of data sources that form categories and themes grounded on the data (Boeije, 2012; Creswell & Miller, 2017).

4.8. Statistical Analysis

The responses to the survey questionnaire will be tallied using the SPSS, and then they were tabulated and organized accordingly. The data were presented, analyzed, and interpreted using frequency, percentage, mean, standard deviation, independent samples t-test, one-way ANOVA, and Pearson's r correlation.

For research question no. 1, descriptive statistics such as frequency counts and percentages were used to treat responses in the demographic profile of the physical education teachers.

For research question no.2 and 3, weighted mean will also utilize to treat the scores of the PE teachers' and PE coordinators' assessment of PE teachers' instructional performance through the following components.

The following will be used to interpret the WM:

Mean Range	Verbal Description	Interpretation
4.50 - 5.0	Strongly Agree	Excellent
3.50 - 4.49	Agree	Very Satisfactory
2.51 - 3.49	Neutral	Satisfactory
1.51 - 2.49	Disagree	Fair
1.0 - 1.49	Strongly Disagree	Poor

For research question no. 2 and 3, independent samples t-test at one way ANOVA will used to find out the significant relationship between instructional performance of PE teachers when compared based on assessment of the PE coordinators when are grouped according to above mentioned variables.

4.9. Ethical Considerations

The researcher constructively considered and carefully followed the ethical considerations that must be met to protect the rights of all the respondents. The following are the Ethical considerations:

4.10. Conflict of Interest

The researcher of this study will be ensured that there would be no conflict of interest. The researcher will need to elaborate and clearly state the purpose of this research and study to the chosen respondents. It is also a must that the researcher must stick to the purpose of gathering personal information and data. All gathered data must not be used for any form of exploitation against the respondents. The researcher must stick to the objective of the research and its purpose.

5. Results, Analysis And Interpretation

This chapter presents the collected data, their results and analysis according to the statement of the problem. The researcher's interpretations and inferences drawn from factual evidences and first-hand experiences will also be presented.

The assessment of PE teacher respondents on their instructional performance in Planning of the lesson, Delivery of the lesson, Teaching Pedagogy and Strategies and Assessment of Learning

Table 1

PE Teacher Respondents' Assessment on their Instructional Performance in Terms of Planning of the Lesson

Planning of the Lesson	Mean	SD	Qualitative Description	Interpretation	Rank
1. Adequate time is devoted to planning appropriate instructional materials according to the students' comprehension ability.	3.98	0.14	Agree	Very Satisfactory	1
2. Takes time to assess the topics of the lesson taught to the student based on the students' understanding ability to develop the important components of the physical education subject.	3.96	0.20	Agree	Very Satisfactory	2
3. Devote time to the activities that will encourage the interest of students to cultivate different aspects of Physical Education based on the implemented curriculum standards.	3.94	0.24	Agree	Very Satisfactory	3.5
4. Able to manage and implement methods to properly teach the subject according to the set time.	3.94	0.24	Agree	Very Satisfactory	3.5
5. Proper planning is carried out to execute the teaching of various activities in Physical Education both inside and outside the classroom.	3.92	0.27	Agree	Very Satisfactory	5
Composite Mean	3.95	0.16	Agree	Very Satisfactory	

Legend: 4.51-5.00 Strongly Agree/Excellent; 3.51-4.50 Agree/Very Satisfactory; 2.51-3.50 Neutral/Satisfactory; 1.51-2.50 Disagree/Fair; 1.00-1.50 Strongly Disagree/Poor

As shown on table 1 that generally, the physical education teachers' respondents are very particular in terms of planning of the lesson as manifested on the following statements: adequate time is devoted to planning appropriate instructional materials according to the students' comprehension ability with 3.98 mean. Followed by the statement takes time to assess the topics of the lesson taught to the student based on the students' understanding ability to develop the important components of the physical education subject with 3.96 mean slightly higher percentage to the statements devote time to the activities that will encourage the interest of students to cultivate different aspects of Physical Education based on the implemented curriculum standards and able to manage and implement methods to properly teach the subject according to the set time with similar mean 3.94%. For the final preparation of the lesson plan of PE teachers is the statement proper planning is carried out to execute the teaching of various activities in Physical Education both inside and outside the classroom with 3.92 mean.

6. Summary, Conclusion, and Recommendation

This chapter presents the summary of findings in Chapter 4, the conclusions drawn from the findings, the recommendations of the study, as well as the suggested subject matters for further research.

6.1. Summary of Findings

The research design that utilized in this study was descriptive comparative analysis to describe and compare the self-assessment of teachers' result and assessment of coordinators' result if their answers are related or not.

1. Based on the findings, on the overall assessment in instructional performance of the PE Teachers, Planning of the Lesson with the highest mean of 3.95 and with the interpretation of Very Satisfactory assured as part of their teaching performance in PE. Delivery of the Lesson, Teaching Pedagogy and Strategies and Assessment of Learning followed with similar interpretations of Satisfactory. But Assessment of Learning has the lowest mean of 2.90. Based on the findings that the lowest instructional performance in teaching PE by teachers is Assessment of Learning.

It was revealed that there was little difference between the PE Coordinators' performance appraisals and the PE Teachers' subjective appraisals of themselves. PE Teachers whose highest estimate for their instructional performance is Preparation of the Lesson. Meanwhile, PE Coordinators have two high estimates from Planning of the Lesson with 3.94 mean and Delivery of the Lesson 3.87 mean with a similar interpretation of Very Satisfactory the instructional performance of PE teaching. Meanwhile, PE Teachers and PE Coordinators in Teaching Pedagogy and Assessment of Learning have the same assessment that both interpret that the instructional performance in teaching PE is Satisfactory.

3. Based on the findings of the study, PE Teachers who have a satisfactory assessment from the Delivery of the Lesson, Teaching Pedagogy and Assessment and Assessment of Learning should be given a seminar - workshop training for Competencies Program Enhancement to further develop their instructional PE teaching performance.

6.2. Conclusions

Based on the results of the study, the following conclusions were drawn:

1. Most of the teacher's assessment of their instructional performance is neutral, some of the estimated conclusions are the experience of teachers who have only 1 to 5 years of teaching experience. Therefore, they have gained the qualifications recognized for entry into the teaching profession that have an understanding of the subjects/areas in which they are trained in terms of content knowledge and pedagogy. Possessed the requisite knowledge, skills, and values that support the teaching and learning process and manage to learn programs and have strategies that promote learning based on the learning needs of their students. It still takes a lot of practice and experience in planning and teaching methods to get the appropriate learning assessment.

2. Based on the results from the PE Teachers and PE Coordinators' assessment that Teaching Pedagogy and Strategies and Assessment of Learning are equally neutral in interpretation. Therefore, it was concluded that teachers need to improve their skills in designing, selecting, organizing and using diagnostic, formative and summative assessment strategies consistent with curriculum requirements in able to become a proficient PE Teachers.

3. PE Teachers and PE Coordinators had a lowest assessment in Teaching Pedagogy and Strategies and Assessment of Learning. Therefore, it was concluded that beginning PE teachers have great difficulty in assessment as one of the important parts of instructional performance in teacher teaching.

6.3. Recommendations

1. Increase awareness and promotion of the improvement of teaching among PE Teachers to encourage proactive participation in faculty development program and professional development opportunities.

2. Ensure the adaptation and implementation of Reform of teacher education in China must be followed the policies for systemic transformation.

3. The College of Physical Education or the Physical Education Association of China can establish professional standards and formal procedures for teacher certification and registration, and diversified the mode of course delivery by providing enough seminar

workshop on content - teaching pedagogy, curriculum planning, assessment of teaching PE and etc.

6.4. Output of the Study

6.4.1. Proposed PE Teachers' Competencies Enhancement Program Rationale

The proposed competencies program enhancement of Physical Education aimed at equipping beginning PE Teachers with the competencies to meet the psychomotor, cognitive and affective needs of learners. It is aimed at holistic physical literacy, which serves as the foundation for confident, enjoyable and sustained participation in a wide range of physical activities. Thus, it consists of developmentally appropriate activities. PE also aims to optimize health through learning experiences aimed at the formation of physical activity and healthy eating habits, as well as dispositions. These learning experiences likewise extend beyond the classroom; hence, student learning must be reinforced through programs on school and community recreation, as well as organized, competitive sports.

6.4.2. Literature References

Table 1
PE Teacher Respondents' Assessment on their Instructional Performance in
Terms of Planning of the Lesson

Planning of the Lesson	Mean	SD	Qualitative Description	Interpretation	Rank
1. Adequate time is devoted to planning appropriate instructional materials according to the students' comprehension ability.	3.98	0.14	Agree	Very Satisfactory	1
2. Takes time to assess the topics of the lesson taught to the student based on the students' understanding ability to develop the important components of the physical education subject.	3.96	0.20	Agree	Very Satisfactory	2
3. Devote time to the activities that will encourage the interest of students to cultivate different aspects of Physical Education based on the implemented curriculum standards.	3.94	0.24	Agree	Very Satisfactory	3.5
4. Able to manage and implement methods to properly teach the subject according to the set time.	3.94	0.24	Agree	Very Satisfactory	3.5
5. Proper planning is carried out to execute the teaching of various activities in Physical Education both inside and outside the classroom.	3.92	0.27	Agree	Very Satisfactory	5

6.4.3. Conclusion

Based on the results of the study, the following conclusions were drawn:

Most of the teacher's assessment of their instructional performance is neutral, some of the estimated conclusions are the experience of teachers who have only 1 to 5 years of teaching experience.

PE Teachers and PE Coordinators had a lowest assessment in Teaching Pedagogy and Strategies and Assessment of Learning. Therefore, it was concluded that beginning PE teachers have great difficulty in assessment as one of the important parts of instructional performance in teacher teaching.

6.4.4. Acknowledgements

Time in a hurry to slip away is a year of harvest season. I could not have completed my education without the guidance of my mentors, classmates, friends and the support of my family.

I would like to express my sincere thanks to my tutor Garcia for guiding me in the process of topic selection, writing, revision and defense of my thesis, giving me tireless instruction and a lot of support and help. I have benefited a lot from his rigorous style of academic study, the requirement of excellence, rich knowledge, incisive and original opinions, which will surely become my lifetime wealth!

I would also like to thank my team members Dr.Lino Reynoso, Dr.Daniel Saroca, Dr.Loma Esneso, Dr.Senvillano Marquez, Jr and Dr.Gliceria Lunag for their inspiring ideas and wonderful advice which made my Dissertations are more comprehensive and well-founded.

Finally, I would like to thank the experts and professors who reviewed the thesis and attended the doctoral thesis defense committee for their careful guidance in their busy schedules! I would also like to express my heartfelt thanks to my teachers classmates and Friends who have given me help and care for me.

References

- [1] Dangui, W., Yingjie, M., Xianfeng, Z., Jinku, G., Wei, W., and Yingjie M. 2007.Theoretical research on evaluation criteria of physical education teachers in colleges and universities [J]. Journal of Harbin Institute of Physical Education, 25 (1): 44-46.
- [2] Wei, S., Chao, L., and Guo, L. 2013. Review and reflection on the evaluation of college physical education teachers [J]. Journal of Hebei Institute of Physical Education, 27 (3): 52-55.
- [3] Yuan tang, T. 2006. Research on the Theory and Model of Teacher Evaluation in Physical Education Institutions [J] . Journal of Changchun Normal University, p.157-159.
- [4] Fuli, Y., Chengyuan, Z. 2009. Analysis on the selection of evaluation subjects of college physical education teachers [J]. Journal of Yangzhou University (Higher Education Research Edition), p. 55-57.
- [5] Ye, L. 2004. Chinese Basic Education Reform under the Macro Background of Globalization and Informationlization. Shanghai, East China Normal University Press Cheng, L. 2014. Summary of the research on the evaluation of physical education teachers in higher vocational colleges [J]. Education and Occupation, p. 78-79.
- [6] Feng, Z. 2010. Construction of the evaluation index system for primary and secondary physical education teachers [J]. Journal of Shandong Institute of Education, p. 96-99.
- [7] Jinyao, X., Xiaoqiang, S., and Linfeng, X. 2008. Construction of PE teacher evaluation index system and design of evaluation automation system. Journal of Beijing Sport University, p. 960-963.
- [8] Lanfeng, L., and Wu Jian, W. 2009.The application of fuzzy mathematics Theory in the evaluation index system of physical education teachers in developing middle schools. Physical Education Research, p. 90-93.

- [9] Honglian, G.2007.Research on the Evaluation of Primary and Middle School Physical Education Teachers in Chenghua District, Chengdu [D]Chengdu: Master's Thesis of Sichuan Normal University.
- [10] Li, Z.and Liqin, R. 2013.Practical analysis of the evaluation system of physical education teachers in local colleges and universities -- taking Hubei Institute of Technology as an example [J]. Sports Science and Nyberg, G. , & Larsson, H. (2014). Exploring 'what'to learn in physical education. Physical Education and Sport Pedagogy , 19 (2), 123.
- [11] 135.10.1080/17408989.2012.726982 [Taylor & Francis Online],
- [12] Osokina, E., Le-van, T., Zudin, A., & Gotskaya, A. (2020). Investigation of student engagement in physical training classes at school. Revista de Psicología del Deporte (Journal of Sport Psychology), 29(2), 193-199.
- [13] Van Diggele, C., Burgess, A. & Mellis, C. Planning, preparing and structuring a small group teaching session. BMC Med Educ 20 (Suppl 2), 462 (2020). <https://doi.org/10.1186/s12909-020-02281-4>.
- [14] San Bolkan 2019. Facilitating student attention with multimedia presentations: examining the effects of segmented PowerPoint presentations on student learning, Communication Education, 68:1, 61-79, DOI: 10.1080/03634523.2018.1517895.