



## **The Implementation of Collaborative Strategy in Teaching based on Virtual Instructor System to Improve Learning Outcomes in Sports Health Education**

**Bogy Restu Ilahi<sup>1\*</sup>, Yarmani<sup>2</sup>, Andika Prabowo<sup>3</sup>, Fina Hiasa<sup>4</sup>**

<sup>1,2,3</sup> Physical Education, Faculty of Teacher Training and Education, Universitas Bengkulu, Bengkulu, Indonesia

<sup>4</sup> Language Education, Faculty of Teacher Training and Education, Universitas Bengkulu, Bengkulu, Indonesia

### **Article Info**

#### **Article History :**

Received : July 2023

Revised : December 2023

Accepted : December 2023

#### **Keywords:**

Collaborative Strategy,  
Sports Health Education,  
Teaching, VIS,

### **Abstract**

This research aims to improve the quality of learning in Sports Health Education courses using Collaborative Strategy In Teaching Based on the Virtual Instructor System (VIS) for sixth semester students of the Physical Education Study Program, FKIP, Bengkulu University. Virtual Instructor System (VIS) is an application as a place to work well collaboratively. The Virtual Instructor System (VIS) also tells the team during task evaluation how specific the instructions are and will be carried out. This research uses descriptive qualitative, where the practice of adopting the Virtual Instructor System (VIS)-based Collaborative Strategy In Teaching learning approach is described in each context. Where data collection is carried out through test and non-test techniques. As a result, achievement targets were obtained in cycle II with the following details; 15 students or 42% got category A, 17 students or 47% got category B, 4 students or 11% got category C, and none or 0 students got category D. The results of the response questionnaire distributed to students showed the results The final score was 24.61 or an average of 4.1, which means that the category most often chosen by students was agreed. These results show that the implementation of learning in the application of Collaborative Strategy In Teaching for sixth semester students of the Physical Education Study Program, FKIP, Bengkulu University is of interest to students. It not only reaches aspects of knowledge implementation but also increases students' creativity and interest in learning activities.



\*Corresponding email : bogyrestu@unib.ac.id

## INTRODUCTION

Education in Indonesia is currently faced with demands to be able to produce quality human resources (HR), namely HR who are able to adapt to the current era of globalization (Oviyanti, 2016). The human resources in question are people who have the competencies needed to enter life, especially the world of work which is full of competition and challenges (Supriadi, 2016). To fulfill this, educational goals and strategies must be directed at the formation and mastery of certain competencies. One of the important elements related to this educational strategy is how to organize the learning environment so that learning activities are truly enjoyable activities for students.

One of the compulsory courses for undergraduate students in the Physical Education Study Program (Penjas) FKIP Unib is the Sports Health Education course which has a weight of 2 credits. This course has learning outcomes, namely that students are able to carry out various Sports Health Education well. The learning in the Physical Education study program is different from other study programs, the difference is regarding the percentage of practice. In physical education learning, almost all courses emphasize practical activities, where students are able to carry out a certain sports activity which is the aim of each course in the physical education study program. Learning in the Sports Health Education course emphasizes how students can later become teachers who can organize sports health education in schools.

Physical education is a learning process through physical activity designed to improve physical fitness, develop motor skills, knowledge and healthy and active living behavior, sportsmanship, and emotional

intelligence (Kanca, 2018). The learning environment is carefully arranged to increase the growth and development of all domains, physical, psychomotor, cognitive and affective for each student. The experiences presented will help students understand why humans move and how to perform movements safely, efficiently and effectively (Suryobroto, 2004). From the many opinions regarding the meaning of physical education, it can be concluded that physical education is an educational process that utilizes systematically planned physical activities directed at developing and improving individuals organically, neuromuscularly, perceptually, cognitively and emotionally within the framework of the National education system.

Initial observations carried out at the Physical Education Campus, showed that the causes of low learning outcomes include: students having difficulty in understanding technical matters such as applying bandages when injured, applying ice compresses to injured athletes, administering artificial respiration and various practical materials in participating in teaching and learning activities, especially When students are given assignments in the Sports Health Education subject, many of the students postpone doing the assignments, confirmed by several reasons put forward by the students, namely that it is not their desire not to submit assignments but that they did not master the previous meeting material well due to the class being held. Very busy, up to 35 people in one class. So that the expected competency standards are not achieved resulting in learning outcomes that do not meet the standards and learning outcomes are lacking.

The success of implementing Collaborative Strategic in Teaching really depends on how to use learning methods

(Dakhi, 2022). Therefore, for each learning meeting it is necessary to design a learning cycle that is interesting and allows students to be more motivated, have a curious nature, have a feeling of helping others, compete healthily and work individually with more direction (Risdiawati, 2012).

The choice of a particular teaching method will influence the type of appropriate teaching media (Ani Cahyadi, 2019), although there are still various other aspects that must be considered in choosing media, including the purpose, type, tasks and responses, which are expected to be mastered by students after teaching takes place and the learning context and characteristics. students (Abdullah, 2017). In line with this opinion, interactive learning media is needed to represent material to be given to students in the era of independent learning who tend to be technologically literate (Hiasa et al., 2022).

The learning media in question is Android-based learning media (Apsari & Rizki, 2018). Android is an operating system for Linux-based mobile devices that includes an operating system, middleware and applications (Irawan & Rosyani, 2022). Android is currently the operating system most widely used on cell phones ranging from low end to high end. This is because the policy it implements means that anyone can use it to run their cell phone (Rahmawati & Abdulmanan, 2019). It can be concluded that the Android system itself can reach all parties, so that by creating Android-based learning media it can be said that this media is not only relevant to the needs and habits of students who are close to technology, but also has no limitations in terms of users.

Collaborative Strategy in Teaching is a technique that teaches students to work together on teaching assignments to improve better

understanding. In line with the statement above (Sulistiyani, 2014). Collaboration strategies in teaching are really needed to improve learning outcomes for students in the field (Wahidah et al., 2022). The method used states that with the presence of learning media, the teacher's position is no longer as the only source of learning, but as a facilitator. (Jauhari, 2018). The media is believed to have a position as a learning resource that concerns the entire environment around students (Kasetyaningsih, 2021). This situation also makes researchers want to develop Android-based learning media in the form of a Virtual Instructor System (VIS) for Sports Health Education material.

The research that researchers will carry out is a combination of Collaborative Strategic in Teaching and Virtual Instructor System (VIS) in practical learning in sports health education courses. The limited research on the use of Collaborative Strategic in Teaching and Virtual Instructor System (VIS) in the learning process, especially in Sports Health Education courses is also the reason researchers want to conduct this research. The use of learning media based on the Virtual Instructor System (VIS) application makes it possible to achieve the objectives of learning in the era of independent learning policies - independent campuses and allows the creation of effective and comprehensive learning outcomes for students that are practical in technical understanding of psychomotor skills.

## METHODS

This research is Classroom Action Research (Hopkins, 2011). namely action research within the scope of education carried out by lecturers and at the same time as researchers in their class or together with other people (collaboration) by designing, implementing and

reflecting on actions collaboratively and participation which aims to improve or improve the quality of the learning process in the class through certain actions (treatment) in a cycle (Subali, 2014).

This research uses a descriptive method because in this research a description will be produced (Subali, 2014). To what extent has the quality of learning improved with a collaborative strategic approach in teaching using the Virtual Instructor System (VIS) application as learning in application to sports health education courses. The use of the Virtual Instructor System (VIS) application in the collaborative strategic approach in teaching makes it possible to achieve learning goals in the current 21st century learning era where the teaching team can carry out learning using technological media to carry out repetition and evaluation quickly through applications that are integrated together.

### Research procedure

This class action research plan will be implemented in two cycles, and each cycle consists of four stages (Punaji, 2013), namely (1) planning stage, (2) action (acting), (3) observation (observing), and (4) reflection (reflecting). The following is a table that describes the research flow that the researcher will carry out.

### Participants

The population of this study were all students of the Physical Education Study Program FKIP UNIB T.A. 2023/2024. Meanwhile, the sample in this study were students who took the Sports Health Education course, Physical Education Study Program, FKIP UNIB

### Data collection technique

The data in this research was collected through one of the test and non-test techniques, namely by using observation sheets to see students'

abilities in expressing their abilities and also by giving questionnaires before and after the learning model was implemented (Sugiyono, 2016). The test technique will be carried out at the end of the cycle in the form of giving test questions to determine students' knowledge of the material that has been studied from the collaborative strategic approach in teaching (Retno Marsitin, 2014) using the Virtual Instructor System (VIS) application as a learning medium.

### Research Instrument

Research instruments are tools used to collect research (Noor, 2017). The instrument used is an observation sheet. Apart from that, the instrument in this research is also a questionnaire which will be given after cycle 1 and cycle 2 end to determine student responses to learning activities (Nayla, 2018).

### Data analysis

The data analysis technique used in this research is questionnaire (Ardiansyah et al., 2013) data for material experts and media experts as well as student response questionnaires carried out with five assessment scales, where the highest score is 5 (strongly agree) and the lowest score is 1 (disagree). To calculate the total average score from each questionnaire, the formula is used:  $X = \sum X/N$ . The scores obtained are then converted according to the table reference below:

**Table 1.**

Value interval	Category
$X > X_i + 1,8 S_{bi}$	Strongly agree
$X_i + 0,6 S_{bi} < X \leq X_i + 1,8 S_{bi}$	Agree
$X_i - 0,6 S_{bi} < X \leq X_i + 0,6 S_{bi}$	Simply Agree
$X_i - 1,8 S_{bi} < X \leq X_i - 0,6 S_{bi}$	Disagree
$X \leq X_i - 1,8 S_{bi}$	Don't agree

Meanwhile, for the test questions given to students, the scores obtained will later be entered into the assessment category table so that a percentage of the number of students with certain assessment categories will be produced.

## RESULT

Research that was carried out from January to August 2023 on Physical Education students, Bengkulu University, totaling 36 students, showed that the use of the Virtual Instructor System (VIS) application as a learning medium in The Implementation Of Collaborative Strategy In Teaching in learning can improve student learning outcomes. in the Sports Health Education course. The following is a table showing the scores obtained before (cycle 1) and after (cycle 2) the use of the Virtual Instructor System (VIS) application in The Implementation Of Collaborative Strategy In Teaching.

**Table 2.** Learning Results for Cycles I and II

Value Range	Letter	Description	Target achievements	Cycle I Value Acquisition	Value Achievement Cycle II
85-100	A	Very good	30%	8 22%	15 42%
70-84	B	Good	50%	15 42%	17 47%
50-69	C	Pretty good	20%	13 36%	4 11%
0-49	D	Not good	0%	0 0%	0 0%
Amount				36	100 %

From the table, it appears that there was an increase in learning outcomes before the use of the Virtual Instructor System (VIS) application in The Implementation of Collaborative Strategy in Teaching and after the media and learning model were implemented. In cycle 1 there were 8 students who got grades in category A, while in cycle 2 there

were 15 students. This means that there is an increase from the first cycle to the second cycle, namely 20%. Furthermore, there were 15 students who got a grade in category B in cycle 1, while in cycle 2 there were 17 students. This means that there is a percentage increase of 5% from the first cycle to the second cycle. Then, for category C grades there were 13 students in cycle 1, while in cycle 2 there were 4 students. This means that there is a decrease in the number of students who get sufficient grades in cycles 1 and 2, this decrease is 25%. Category D values in both cycle 1 and cycle 2 both total 0.

These results indicate that the use of the Virtual Instructor System (VIS) in The Implementation of Collaborative Strategy in Teaching can improve student learning outcomes in the Sports Health Education course. This research was carried out online in accordance with the instructions for teaching and learning activities in the pandemic era decided by the government and Bengkulu University. Next, we will explain in detail the classroom action research process that the researcher carried out, which consists of 2 cycles and each cycle consists of four stages, namely (1) planning stage, (2) action (acting), (3) observation (observing), and (4) reflection (reflecting).

## DISCUSSION

The use of the virtual instructor system (vis) application as a learning medium in implementing the implementation of collaborative strategy in teaching model in the sports health education course at the physical education study program fkip unb can improve student learning outcomes. This increase in learning outcomes was seen in the second cycle, where in this cycle the percentage of students who obtained grades in the very good category was 42% or 15 people. These results have increased

compared to the learning results in cycle 1, namely the percentage of students getting the very good category was only 22% or as many as 8 students. It can be concluded that the implementation of the test in the form of completing 10 essay questions in each cycle to determine the level of student understanding shows that students achieved the target learning outcomes in the second cycle through the implementation of the implementation of collaborative strategy in teaching learning model, namely in the form of assignments to create material management projects using the virtual instructor application. System (vis).

The conclusion above is supported by the results obtained in practice in cycle 1, namely the average student score was 72.86, which means these results show that practice via zoom media obtained a score in the good category. In cycle 2 the average score obtained by students in practice using the virtual instructor system (vis) application was 83.5. The practice scores in cycles 1 and 2 show that the practice results of the sports health education assignment are greater with the use of the virtual instructor system (vis) application. Apart from practical results, the results of the questionnaire which are student responses in cycles 1 and 2 also show that students are more motivated by using the virtual instructor system (vis) application in learning activities. In cycle 1, the final score was 18.86 or an average score of 3.1, which means that the answer category most often chosen by students was quite agree. In cycle 2 the final score obtained was 24.61 or an average of 4.1, which means the category most often chosen by students was agreed.

Providing sufficient time to work on material management projects and use applications that students like, correlates with seriousness and maximization in completing assignments. This can also be

seen from the resulting video. Where the average student produces a Virtual Instructor System (VIS) project that makes material management interesting. This assignment using the Virtual Instructor System (VIS) application is an implementation of the Implementation of Collaborative Strategy in Teaching model where students not only analyze problems in the material but also explore, collect information, carry out interpretations and assessments in working on projects related to production. Sports Health Education materials produced.

This learning allows students to develop their creativity with various points of view and utilize the Virtual Instructor System (VIS) features according to the tastes and interests of application users (Sarah et al., 2019). Project management of Sports Health Education materials that are uploaded will be seen by Virtual Instructor System (VIS) users, of course students want to present the best project management to share with others. Not only does it reach aspects of knowledge implementation but also increases students' creativity and interest in learning activities. The results of this research show that the combination of contemporary technology with Sports Health Education courses can improve learning outcomes.

## REFERENCES

- Abdullah, R. (2017). Pembelajaran Dalam Perspektif Kreativitas Guru Dalam Pemanfaatan Media Pembelajaran. *Lantanida Journal*, 4(1), 35. <https://doi.org/10.22373/lj.v4i1.1866>
- Ani Cahyadi. (2019). Pengembangan Media dan Sumber Belajar. *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- Apsari, P. N., & Rizki, S. (2018). Media Pembelajaran Matematika Berbasis Android Pada Materi Program

- Linear. AKSIOMA: Jurnal Program Studi Pendidikan Matematika, 1(1), 103–107.
- Ardiansyah, Risnita, & Jailani, S. (2013). Pengumpulan Data Dan Instrumen Penelitian. Jurnal Pendidikan Islam, 1, 1–9.
- Dakhi, O. (2022). Implementasi Model Pembelajaran Cooperative Problem Solving Untuk Meningkatkan Kreativitas Dan Prestasi Belajar. *Educativo: Jurnal Pendidikan*, 1(1), 8–15.  
<https://doi.org/10.56248/educativo.v1i1.2>
- Hiasa, F., Youpika, F., & Yanti, N. (2022). Pengembangan Media Pembelajaran Teka-Teki Silang Sastra Melayu Klasik Berbasis Android. *Diglosia: Jurnal Kajian Bahasa, Sastra, Dan Pengajarannya*, 5(2), 421–436.  
<https://doi.org/10.30872/diglosia.v5i2.322>
- Hopkins, D. (2011). Penelitian Tindakan Kelas (Edisi I). Pustaka Belajar.
- Irawan, B., & Rosyani, P. (2022). Perancangan Aplikasi Pengenalan Kebudayaan dan Pariwisata Kabupaten Cianjur Berbasis Android. *TIN: Terapan Informatika Nusantara*, 2(8), 521–526.  
<https://doi.org/10.47065/tin.v2i8.1187>
- Jauhari, M. I. (2018). Peran Media Pembelajaran dalam Pendidikan Islam. *Journal PIWULANG*, 1(1), 54.  
<https://doi.org/10.32478/ngulang.v1i1.155>
- Kanca, I. N. (2018). Guru Pendidikan Jasmani Olahraga dan Kesehatan di Abad 21. Prosiding Seminar Nasional IPTEK Olahraga, 1(1), 21–27.
- Kasetyaningsih, S. W. (2021). Pengaruh Penggunaan Multimedia Terhadap Minat Belajar Siswa Pada Mata Pelajaran Pendidikan Agama Islam. *Tarbiyah MU*, 1(1), 14–22.
- Nayla, A. (2018). Peningkatan Kemampuan Menulis Kreatif Dengan Strategi Analisis Model Dan Strategi Kerja Berpasangan Bermuatan Konteks Sosial Pada Mata Kuliah Pembelajaran Menulis Mahasiswa Angkatan 2016/2017 Universitas Pgri Semarang. *Jurnal Penelitian Bahasa, Sastra, Dan Pengajarannya*, 3(1), 11–17.
- Noor, J. (2017). Metodologi Penelitian. Jakarta: Perpustakaan Nasional.
- Oviyanti, F. (2016). Tantangan Pengembangan Pendidikan Keguruan di Era Global. *Nadwa: Jurnal Pendidikan Islam*, 7(2), 267–282.  
<https://doi.org/10.21580/nw.2013.7.2.562>
- Punaji, S. (2013). Metode Penelitian & Pengembangan. Kencana Prenada Media Group.
- Rahmawati, E., & Abdulmanan, E. (2019). Permodalan Aplikasi Dunia Islam Mengaji Berbasis Android. *Jurnal Ilmu Pengetahuan Dan Teknologi Komputer*, 4(2), 197–20.  
<http://www.nusamandiri.ac.id>
- Retno Marsitin. (2014). Implementasi Cooperative Learning Berbasis Computer Dengan Pemberian Quiz Dalam Meningkatkan Kualitas Perkuliahan Topologi di Program Studi Pendidikan Matematika. *Prosiding Seminar Nasional*, Volume 2, 128–138.
- Risdiawati, Y. (2012). Implementasi Model Pembelajaran Kooperatif Tipe Student Teams Achievement Divisions ( Stad) Untuk Meningkatkan Motivasi Dan Hasil Belajar Akuntansi Siswa Kelas Xi Ips 4 Sma Negeri 1 Imogiri Tahun Ajaran 2011/2012. -, 214.
- Sarah, S., Fuadi, T. M., & Hadiati, S. (2019). Menjadi Pendidik

- Profesional Di Era Revolusi Industri 4.0.
- Subali, B. (2014). Penelitian Tindakan Kelas. *Jurnal Pendidikan Akuntansi Indonesia*, 6(1), 1–18. <https://doi.org/10.21831/jpai.v6i1.1793>
- Sugiyono. (2016). Metode Penelitian Kuantitatif, Kualitatif dan R&D. In Bandung, alfabeta.
- Sulistiyani, L. (2014). Wacana pengembangan model pembelajaran kooperatif mata kuliah dasar-dasar akuntansi pada Perguruan Tinggi. *Informatika*, 1(2). <https://e-journal.stie-aub.ac.id/index.php/informatika/article/view/44>
- Supriadi, H. (2016). Peranan Pendidikan Dalam Pengembangan Diri Terhadap Tantangan Era Globalisasi. *Jurnal Ilmiah Prodi Manajemen Universitas Pamulang*, 3(2), 92–119.
- Suryobroto, A. S. (2004). Peningkatan Kemampuan Manajemen Guru Pendidikan Jasmani. *Jurnal Pendidikan Jasmani Indonesia*, 1(1), 62–68.
- Wahidah, A. F. N., Naimah, N., & Utami, D. T. (2022). Peningkatan Kualitas Pembelajaran Online melalui Strategi Komunikasi Efektif Selama Pandemi Covid-19. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 6(4), 3418–3428. <https://doi.org/10.31004/obsesi.v6i4.1615>