



On the Edge of Sports School: Challenges in Academic Arrangement Toward Development of Teaching Innovation in the Context of Thai Sports Schools

Araya Pittayachamrat^{*1}, Yang Chung-Bing² and Tsao Te-Hung³

¹Department of Education and Human Potential Development, Hua-Shih College of Education, National Dong Hwa University, Hualien, Taiwan

²Department of Physical Education and Kinesiology, Hua-Shih College of Education, National Dong Hwa University, Hualien, Taiwan

³Si-Wan College, National Sun Yat-Sen University, Taiwan, Kaohsiung, Taiwan

^{*}Corresponding author, E-mail: arayapitt129@gmail.com

Abstract

Thai sports school is a school for children who are talented in sports. All of their students are athletes. To develop this special talent group of students, the school's academic arrangement context is different from the general school. The differences cause teachers to face challenges in their work. This study investigates the problems in academic arrangement that are obstacles to the development of teaching innovation in Thai sports schools. The problems were issues from the perspective of a sports school teacher, who is a person at the practical level. Participants were 30 academic teachers from eleven sports schools throughout the country. The semi-structured interview, which consisted of eleven questions, was conducted via an online meeting platform. This research design uses grounded theory, which conducts three rounds of the coding process. The result reveals that there are three categories for the problem. The first is student fatigue. The second issue is related to the fact that the teaching time was insufficient. The last issue is the outdated school facilities. All these problems have the same root, which is school management. The result will lead to the creation of the appropriate environment in school by preparing and planning for better academic arrangements, which will support and encourage teachers to develop innovation in teaching, which can enhance the academic class in sports schools.

Keywords: Thai Sports School, Academic Arrangement Problem, Innovation Development

1. Introduction

"Innovation in education is about more than new technology. It's about solving a real problem in a fresh, simple way to promote equity and improve Learning." (The United Nations International Children's Emergency Fund, n.d.)

The United Nations International Children's Emergency Fund (UNICEF) defines innovation in education as a means to enhance quality and equity. According to the Organization for Economic Co-operation and Development (OECD), innovation is a new or improved product or process significantly different from its original (Vincent-Lancrin, 2023). The innovation has various types, such as services, processes, or products (The United Nations International Children's Emergency Fund, n.d.). Therefore, innovation in education refers to new or improved simple services, processes, or products that enhance quality and equity in education. The use of innovation in education includes teaching, which can improve the standard and quality of teaching.

The OECD published Measuring Innovation in Education, which mentions factors and obstacles to innovation in education. The environment of the organization is a factor that affects the development and use of innovation in each organization (Fuad, Musa, & Hashim, 2022; Vincent-Lancrin, 2023). In the same way, the obstacle to innovation in such organizations is related to the support or non-supportiveness of the

[278]



organization and the ability to problem-solve in innovation usage (Vincent-Lancrin, 2023). Thus, the environment significantly influences innovation development and usage in the organization. Thai sports schools have a specific environmental context, which might create problems for teachers in the sports schools in developing and using teaching innovation.

The academic arrangement in Thai sports schools has a different status compared to general schools, which do not focus on special talent development. Thai sports school visions and missions are not only focused on academic aspects but also concerned with developing athletic skills for students. Some schools are concerned with the athletic aspect as their primary goal (Chiang Mai Sports School, n.d.; Chonburi Sports School, n.d.; Khon Kaen Sports School, 2023; Lampang Sports School, n.d.; Nakhon Si Thammarat Sports School, n.d.; Suphanburi Sports School, 2014; Ubon Ratchathani Sports School, n.d.). Consequently, academic arrangements in sports schools are not the priority. It also affects the policy and school organization, which is more concerned with the athletic aspect to develop their students to be part of the national squad or professional athletes in the future.

In sports school, coaches have more influence on student-athletes than teachers. The reason is student-athletes have more motivation toward athletic commitment than academic commitment (Lucas and Lovaglia, 2008, as cited in Hart et al., 2024; Simons et al., 1999), and their coach also has more influence on them. Thus, the coach is the person who decides a player role in the team, who will have game time, and who will not. Consequently, student-athletes have to respect and prioritize their coach. When it comes to the time conflict between academic and athletic commitment, student-athletes will choose athletics because it can affect their status on the team. Another case is that student-athletes might let their coach decide for them (Simons et al., 1999). The higher motivation can reflect the influence of coaches on student-athletes. Chan, Lonsdale, & Fung (2012), in a study about the influence of coaches, parents, and peers on athletes during their childhood and adolescence, found that the coach's role affects the athlete's experience in both childhood and adolescence in enjoyment and competence. Moreover, coaches can also create anxiety for student-athletes by their coaching character (Ramis et al., 2017). Coach roles have a strong influence on student-athletes throughout their school age. Higher motivation and the strong influence of a coach affect the teacher's role in sports schools, who may not get the same level of respect and obedience as the coach. This situation differs from general schools, where the academic teacher gets priority.

The school objective and student-athletes prioritize athletic activities and their coach, which automatically diminishes academic activities. These contexts affect the academic arrangement, which might cause difficulties and problems. This makes it challenging for teachers to create and develop teaching innovations in sports schools. However, previous studies have investigated and addressed problems and needs in sports schools. Studies are also being conducted to propose an approach or model for sports schools in the future in order to make them more effective and successful.

Previous studies have investigated the problems and needs of sports schools from the students' perspective in many aspects related to their life in school. Buatong (2009) studied the problems and needs of student-athletes in general aspects, including problems and needs in athletic arrangement, relationships with friends, and the study. The results show that the athletic arrangement at the highest level, followed by complex school regulations, relationships with friends, and studying issues, got the modest level. However, there is also research about problems and needs related to academic study and evaluation. The study results relate to many academic issues, including teacher and teaching style, curriculum, teaching method, and evaluation (Jansri, 2013; Tarndonrat, 2017). Moreover, some studies address problems from the teacher's perspective. Panthong (2017) studied the problem and development approach in curriculum management. This only concerns curriculum development, which is only one aspect of the influence of curriculum on academic context in sports school. Research does not include the influence or effectiveness of the curriculum in practice, which is important to the academic arrangements that has to get along with course structure. It can lead to problems if the structure is not designed based on sports schools' special context. In conclusion, research about problems and needs is studied from the point of view of students in general and school academic



arrangement, and the teacher's point of view only relates to curriculum development issues. It does not include other aspects of the school's academic arrangement.

The model or approach of a sports school proposed by a previous study suggests that the school should have systematic and sustainable development of school management in each factor, including the ideology and framework of the school development plan (vision, missions, or philosophy), workforce, funding, and curriculum. Moreover, the school has to be concerned about the related regulations, laws, and policies; related stakeholder groups both inside and outside the school; and the quality of education and sports quality (Jansukwong & Sawangmek, 2018; Khajornsilp, 2010; Tingsabhat, 2011). These models and approaches mainly concern the school's general management and administration. The academic arrangements are not the primary focus of this research.

Considering the different contexts of academic classes, teachers and students in sports schools can be challenging for teachers. Teachers have to develop innovation to improve their teaching. It includes the creation of learning materials and the implementation of new teaching methods. In addition, teachers can employ technology to improve teacher performance in a limited time, so it is important for teachers to develop innovation to make lessons easier for students to understand. Previous studies argued that the organizational environment and contact are related and affect the use of innovation (Fuad et al., 2022; Vincent-Lancrin, 2023). So, it insists on how the challenge in Thai sports school academic arrangements affects the development of teaching innovation in different contexts.

Previous research reveals a gap in the issues of study in sports schools' academic arrangements that relate to the specific context of sports schools from the perspective of teachers, which can reveal problems in academic arrangements that affect the limitation of teachers in the development of teaching innovation. This research is a study about the problems in academic arrangement in the context of Thai sports schools from teachers perspectives, which leads to the limitation of teachers in developing teaching innovation. Grounded theory was implemented in this research. It allowed the researcher to investigate the pattern and relation of problems in each factor and also the specific context of sports school from the teacher's point of view that might have been overlooked by previous studies. The findings of this research will raise the awareness of policymakers and sports school administrators about the practical need to improve the academic quality by providing a suitable environment for academic improvement in sports schools.

2. Objectives of study

To reveal problems and limitations in academic arrangements in Thai sports schools that affect teaching and innovation development.

3. Materials and Methods

This research is qualitative research designed to use grounded theory as a method. The semi-structured interview with eleven questions was the data collection process. Three rounds of coding are implemented to use in analyzing all data from the interview process.

3.1. Participant

The participants are 30 sports school teachers from 11 sports schools around the country. They teach both core and elective courses. The specification for participants is that teachers must have at least three years' experience teaching sports school. In order to have the experience and be familiar with the environment, context, and students in sports school.

3.2. Interview questions

The interview questions are divided into three parts. The first part is designed to make participants more comfortable and familiar with the interviewer while gathering basic information at the same time. Hence, the first part will ask the participants to introduce themselves, their experiences, school context, and



students' daily timetables. The second part of the question is related to academic arrangement problems that teachers face in their classes and at the school level. This part includes solutions that teachers use to solve their issues. The third part is about the opinions of faculty that affect the sports school's academic arrangements and suggestions for their school.

3.3. Data Collection

The data collection process uses semi-structured interviews. The interview has eleven questions for the participants to answer. However, the participants have the right to refuse to answer the questions and have the right to withdraw from the interview without providing a reason. The interview was conducted using an online platform, Google Meet. The interview length is around 30-45 minutes. The interview appointment is flexible based on the participant's context. Before the interview starts, participants will be notified about their rights. Additionally, participants will receive notifications about video and audio recordings, including when the recording starts and stops.

3.4. Data Analysis

Before conducting the analysis process, raw data was prepared to be suitable for analysis. The first process was to transcribe each interview record verbatim. The second process was to clean data from typos or irrelevant words. Then, the data was arranged in the proper format to be suitable for the grounded theory coding process. The data analysis tool was NVivo 14, which was used for coding processes.

This research design uses "Grounded Theory," which was proposed by Glaser & Strauss in 1967 and developed by Strauss & Corbin (1998) and Charmaz (2006). Followed by Birks and Mills (2015), there were three coding processes in grounded theory. The first was initial coding, the first round of coding that had to interpret data and code it for the first time. The next round was intermediate coding. All codes from the initial coding were categorized, and the related codes were in the same category. The last round was advanced coding; this process was to find relations between each category.

In analyzing data, researchers have to conduct three rounds of coding. After the data preparation process, the first round of coding or initial coding, the researcher codes the interview data by each sentence or long passage based on the interpretation of how the data contributes to the research questions or purpose of the study (Saldaña, 2013). Code is the words or phrases the researcher generates to define the interpretation of words, phrases, or passages from data (Saldaña, 2013). The next round is intermediate coding. The researcher has to find the relation between each code and categorize codes that are related together. After all codes are categorized, the pattern of relation or the idea might emerge in this round. For the advanced coding process, the researcher has to find the relation between each category. The relation between each category is described as the theory, ideology, or key assertion that emerges from the data (Saldaña, 2013).

4. Results and Discussion

4.1. Result

The data analysis results reveal three main categories of problems that relate to the limitations and influence of teachers on the development of teaching innovation. The first main category was problems related to student-athletes. The second category was a problem related to the teachers, and the last category was a problem related to school facilities. Before explaining the problems, the explanation of the school's daily timetable for students is an important issue that makes the reader understand the context of the school and student-athlete more.

4.1.1. Student-athlete school daily routine

In general, the daily timetable starts in the early morning, around 5.00 a.m., when students wake up and join the morning training session, which starts around 5.30 to 7.00 a.m. The training plan was different in each sport. It depends on the coach's planning. After completing the training session, student-athletes have



to conduct their daily routine (take a shower, have breakfast) to prepare themselves to study in academic class, which starts around 8.30 a.m. In some sports schools, the academic class schedule was arranged only in the morning, and students could take a rest in the afternoon before joining the afternoon training session. The approximate time for academic classes was around four hours, from around 8.30 a.m. to 12.40 p.m. Afternoon class was around 1.40-2.30 p.m. The afternoon training starts around 3.30-6.30 p.m. Dinner starts around 7.00 p.m., and after that, the students have their free time. Before bedtime, dormitory teachers (including coaches) will arrange night meetings, then the dorm will close, and all students have to go to bed around 9.00 p.m.

4.1.2. Problem related to student-athlete: Fatigue

From a teacher's perspective, fatigue was an important problem in every class and every sports school. This is the classic problem for student-athletes that all teachers in sports schools have experience with. There are a few reasons that students get fatigued during class. The first reason is that students get fatigued from athletic activities. In sports school, student-athletes must follow their timetable from early morning to late evening. The first activity of the day is the morning training session, in which each sport has its own training program, and coach is the one who plans it. This means that different sports have different training programs. Some participants revealed that some sports conduct heavy training programs in the morning. It causes students to get fatigued during classes, even during the first class of the day.

"...If you conduct heavy training, like some sports, such as boxing, that have really heavy training in the morning, then we know that students will fall asleep in the classroom when the fan is opening and the weather is cold. They will fall asleep on the desk..." [Participant SSC11]

Because of the different training programs, some sports conduct light training, and some do heavy training, like the example. Thus, the participant revealed that the coach also noticed this problem, and the academic teacher also asked for cooperation for the coach not to program heavy physical training in the morning session to decrease this problem.

"...If they [student] conduct heavy physical training in the morning, they [students] will not be able to do it [study]. But currently, the academic teachers and coaches have discussed this problem and asked them to be concerned in the morning. For the morning practice, the coach has to be concerned about planning. Because during the training, if they [student] use too much energy, they [student] will fall asleep in the classroom, they [student] will be tired and want to sleep, and also exhausted. If the coach has to practice more adventure activities or something that requires even more energy, they should plan it in the afternoon after completing all academic subjects..." [Participant SSS21]

Another reason for fatigue is that student-athletes do not have enough rest. According to the daily timetable, student-athletes have to wake up around 5.00 a.m., and their bedtime starts around 9.00-10.00 p.m., which is around 7-8 hours, enough for resting time. However, a participant who was also a dormitory teacher revealed that some students do not sleep at the proper time as expected by the school. They use sleeping time for their private tasks, such as playing on mobile phones, social media, or games. This behavior causes them not to have enough time for sleep.

"...The dorm is closed at 10:00 p.m., but when the kids are in the room, the teacher doesn't check their room. Some sports didn't confiscate the student's phone, but some did. So, the student is still tired in the morning..." [Participant SSS22]



In summary, the reasons for fatigue issues of student-athletes were the athletic activities, especially the morning training session. Another reason was that student-athletes did not sleep at the proper time that they expected to sleep. These two reasons reveal that the problem is both from the school side of training arrangements and from the students for their inappropriate behavior.

4.1.3. Problem related to teacher: Insufficient teaching time

Insufficient teaching time was a problem that the participant mentioned. Teaching time was related to study time, too. The reason for the insufficient time for teaching is that the school has a policy to postpone academic classes during major sports competition events such as the Thailand Sports School Games. The reasons for the postponement of classes are to prepare student-athletes for upcoming competitions, which allows students to focus on the competition to achieve the expected achievement. Some schools might postpone classes for 1-2 weeks before the event and a week or two weeks after the event to let students rest from the fatigue from the competition. The duration of the competition was around ten days. Hence, the academic class was postponed for around 4-5 weeks for a major sports event. In general, there are around 20 weeks per semester, including midterm and final exam week. If the class is postponed for around 4-5 weeks, it is cost around one-fourth of the total study time for the event.

“...Thailand Sports School Games is held every year. All thirteen sports schools compete together for two weeks. They [school] postpone [academic classes] for students to train for a week... Then, in reality, it is only 16 weeks. About a month and 4 weeks were lost in the first semester. So, there are about 15-16 weeks left [for study] ...” [Participant SSS22]

Moreover, there are other competition events for each sport that student-athletes have to join. This means that apart from the 4-5 weeks for major sports events, there are also a few days that students have to be absent from classes. The competition schedule was different in each sport. So, sometimes, the teacher rarely has the whole class together.

Another reason is that the school must arrange additional activities such as academic days, school open houses, or special events, such as Buddhist Lent Day. However, for events related to academic activities, teachers in different subjects can cooperate to conduct inclusive assignments or tasks for students to complete, which can sometimes help teachers and students reduce their workload.

“...There are nine student clubs and the Boy and Girl Scouts as normal. There are also academic activities such as mathematics, science, and technology; Thai Language Day; Christmas activities; New Year activities; and Loi Krathong Day. There are many activities for students...” [Participant SSNE31]

Insufficient teaching time is related to the academic position due to the preparation of student-athletes for major sports competitions. Another reason is to postpone classes in order to arrange additional activities for students.

4.1.4. Problem related to school facilities: Outdated technology facilities

Every sports school has a “smart classroom” that installs technology facilities, including a set of computers, a projector, a screen, and a smart board. A smart classroom is the basic classroom for sports schools, and the Ministry of Tourism and Sports (MOTS) supports it. However, due to its long installation period, some schools used it for ten years. Participants from many schools revealed that all equipment in the smart classrooms was lacking of maintenance and was outdated. They are not ready to use.

“...The school still faces maintenance issues, as some rooms lack functional IT equipment. We are renovating the school building. Some rooms will be unavailable after the renovation, so we will notify them

[283]



to address this. We need to upgrade to the newer equipment. When a computer is fast and you turn it on, it doesn't waste time. You can turn it on and use it right away. But sometimes the computer is slow. Sometimes, it is necessary to update technology, which often lacks proper maintenance..." [Participant SSC12]

"...There are several smart classrooms whose equipment is broken or unusable. We [the school] require support for maintenance to make every classroom usable. Currently, some classrooms are unusable, while others can be used..." [Participant SSE12]

The participant also revealed issues in maintaining all IT equipment that take a long time to fix. Moreover, in some cases, there are issues with the maintenance cost, which might be higher to fix than to buy new equipment.

"...The printer is because we have only one of it. The rest are broken, but it cannot be bought. It can only be repaired. But the repair cost is more expensive than buying it; we also can't repair. There will be a shortage of printers because it is not enough for the students' needs..." [Participant SSNE33]

The lack of readiness and outdated equipment made that equipment not meet teacher needs in their teaching.

"...The classroom is equipped with a computer and a projector screen, but these are no longer in use. The school is currently seeking a budget for renovations to the building, and we would like to request additional devices like TVs. This will allow teachers to use an iPad for teaching..." [Participant SSNE32]

The equipment in smart classrooms in sports schools is outdated and not ready to use. One reason is that all equipment was not properly maintained due to the long bureaucratic process. Outdated equipment also leads to the issue that old equipment does not meet the needs of teachers nowadays.

4.2. Discussion

Student fatigue, insufficient teaching time, and outdated technology are problems or difficulties for teachers in sports schools in developing teaching innovation. If we consider each problem, these three problems have the same root.

4.2.1. Student fatigue

As mentioned previously, this research concerns the point of view of sports school teachers, and the student-athlete fatigue issue has never been mentioned in previous research that focused on other stakeholders' perspectives. Therefore, this study addresses a problem that previous studies might not address.

Fatigue is an important issue that relates to student performance in the classroom. It may decrease class engagement, discontinue the study process, and lead to low class achievement. It means that student-athletes easily lose their attention from the lesson or teacher if the class is too boring. They are likely to be passive students, which challenges the teacher to encourage them to focus on the lessons, especially for subjects with descriptive characteristics such as social studies and mathematics. Hence, it is a challenge for teachers who are familiar with the lecture style. Students easily lose attention and fall asleep. Thus, student fatigue is a challenge for teachers to develop teaching innovation that can grab students' attention and maintain it till the end of a lesson or class.

Additionally, it is interesting that an increment in class participation might lead to an increase in academic motivation. Gaston-Gayles (2004) suggested in the implementation of their study about student-athlete academic motivation in Division 1 University that motivation influences the student-athletes to have a better understanding of their studies and might affect their academic performance.



4.2.2. *Insufficient time for teaching*

This situation can refer to the situation in which the school prevents all academic classes for sports events. And students are allowed to be absent from the class if they have to join a competition in each sport. These situations insist that athletic activities are considered the priority, and it automatically pushes academic activities after athletic activities. The prevention of academic classes relates to the school's vision and mission, which is a framework of policy and management that is more concerned with athletic activities and major goals. School vision and mission are the framework of school policy and management.

As mentioned by OECD, the organizational environment is the factor that affects the development and usage of innovation (Vincent-Lancrin, 2023). Fuad et al. (2022) propose in their study that each school's organizational culture and implementing innovation are related. Both studies insist on the importance of a suitable organizational environment for implementing innovation. Therefore, the sports school context that prioritizes athletic performance rather than academic achievement may affect the teacher's innovation development and usage to improve teaching effectiveness.

4.2.3. *Outdated technology facilities*

The outdated technology facilities relate to school management. All sports schools in Thailand are public schools, which means that the school administration process has to follow the bureaucratic process of a general government organization. Miron et al. (2004, as cited in Sipe, 2020) mentioned that low bureaucracy is a value that affects the innovation culture in an organization or institution. Meanwhile, low bureaucracy is contradicted by a high level of bureaucracy that is found in the management of Thai sports schools. Especially regarding financial issues, schools must follow a strict financial process that is regulated by the government. Sipe (2020) suggests that strong leadership and an institutional culture that supports innovation will decrease the effect of bureaucracy.

All three problems have the same root in school management issues. The school management's cooperation between each group of school staff, teachers, and coaches is related to the issue of student fatigue. The planning of the academic arrangement is related to insufficient time for teaching. The long bureaucratic process is a challenge for the school administrator in their resource management skill to solve the outdated facilities issue. Thus, school management is an important issue that can support teachers in developing their teaching by creating an environment to support them in developing teaching innovation.

From the results, the creation of suitable environments that do not diminish the academic aspect leads to the development and usage of innovation that can be encouraged by the school administrators. Straighten communication between teachers and coaches, which leads to cooperation to enhance student performance in both athletics and academics. Well-planning for the special or make-up class schedule can reduce the issue of inefficient teaching time and also show that the school supports students in academic development, which is important to students in case they cannot remain in a sports career. Moreover, reducing paperwork in the bureaucratic process helps teachers and coaches reduce their workload and work smoothly. Solving three issues can lead to an increase in importance in the academic aspect. This situation can create a more suitable environment for academic teachers to develop and use innovation in their teaching to improve the standard of academic teaching in sports schools.

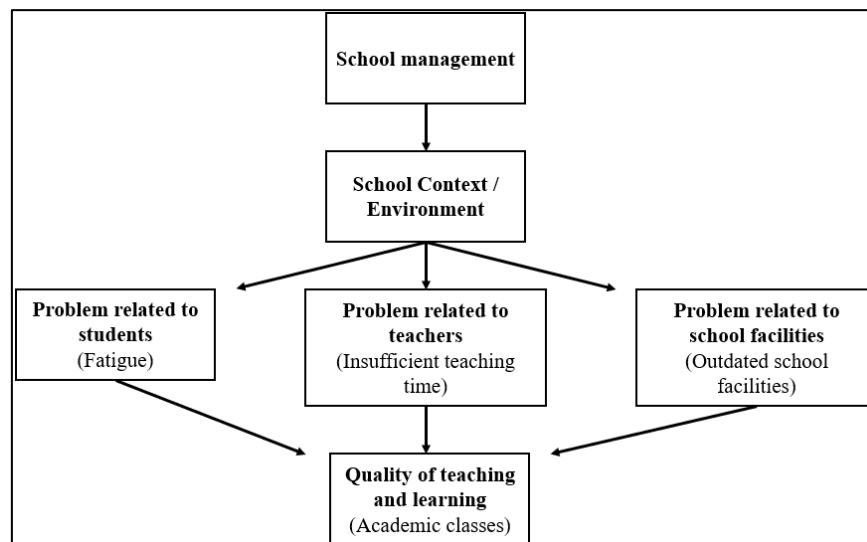


Figure 1 Relation of problems in academic arrangements in Thai sports schools

5. Limitation

This study is limited to Thai sports schools that are organized under Thailand National Sports University, which is organized by the Ministry of Tourism and Sports. For future research, there are sports schools that are organized by other ministries or local governments, such as the Ministry of Education, the Ministry of Interior, and local governments in some provinces. The different organizations might have different school contexts, such as school management, support, and funding from the supporting organization.

6. Conclusion

In 2024, there was an announcement of the Notification of Thailand National Sports University Re: Development Policy of Sports School under the organization of Thailand National Sports University. The notification suggests that sports schools should develop five issues. The first issue is related to school academic arrangements, and the school needs to develop teaching methods that concern student centers and 21st-century learning skills. Furthermore, the last issue for development is school management, which requires sports schools to improve and use more information technology (IT) to improve and develop the learning environment and school management (Thailand National Sports University, 2024).

Therefore, the results of this research are beneficial for the school administrator in that they can be used as a key to concern about the problems from the teachers' perspective regarding their challenges in working and to develop teaching innovation to improve teaching. The results also insist that all of the problems and challenges have the same root in school management, which the administrator is directly responsible for managing.

7. References

- Birks, M., & Mills, J. (2015). *Grounded theory: A practical guide*. Sage.
- Buatong, N. (2009). *The Study of Problems and Needs of the Students in Tessabannakhon Nakhonpathom Sport School*. An Independent Study for the degree of Master of Education in Guidance and Counseling Psychology. Srinakarinwirot University.
- Chan, D. K., Lonsdale, C., & Fung, H. H. (2012). Influences of coaches, parents, and peers on the motivational patterns of child and adolescent athletes. *Scandinavian journal of medicine & science in sports*, 22(4), 558-568. doi: 10.1111/j.1600-0838.2010.01277.x



- Chiang Mai Sports School. (n.d.). *School's philosophy, visions and missions* Retrieved February 13, 2025 from https://cmiss.ac.th/?p=page-detail&page_id=48
- Chonburi Sports School. (n.d.). *Philosophy and Visions*. Chonburi Sports School,. Retrieved February 13, 2025 from <http://www.cbss.ac.th/patchayavisaitad61.65.html>
- Fuad, D. R. S. M., Musa, K., & Hashim, Z. (2022). Innovation culture in education: A systematic review of the literature. *Management in Education*, 36(3), 135-149. doi: 10.1177/0892020620959760
- Gaston-Gayles, J. L. (2004). Examining academic and athletic motivation among student athletes at a Division I university. *Journal of College Student Development*, 45(1), 75-83.
- Hart, K., Madrigal, L., Ede, A., & Fogaca, J. (2024). Examining classroom learning behaviors academic and athletic motivation in collegiate athletes. *Journal of Intercollegiate Sport*, 17(2). doi.org/10.17161/jis.v17i2.21308
- Jansri, N. (2013). *Problems and Needs about Instruction and Evaluation of Anghong Sports School Students*. A thesis for the degree of Master of Education. Kasetsart University.
- Jansukwong, B., & Sawangmek, T. (2018). The Management of Sports Schools to Excellence. *Journal of Education and Innovation*, 22(3), 337-350. https://so06.tci-thaijo.org/index.php/edujournal_nu/article/view/151400
- Khajornsilp, J. (2010). *A propose model of prototype sports schools in Thailand*. A dissertation for the degree of doctor of education in physical education. Chulalongkorn University. doi: 10.14457/CU.the.2010.1577
- Khon Kaen Sports School. (2023). *General Information*. Khon Kaen Sports School,. Retrieved February 13, 2025 from <https://www.kkss.ac.th/home.php?view=491>
- Lampang Sports School. (n.d.). *Philosophy, Visions, Missions*. Lampang Sports School,. Retrieved February 13, 2025 from https://lpss.ac.th/Philo_Visio_Mission.php
- Nakhon Si Thammarat Spots School. (n.d.). *Philosophy, Determinations, Visions*. Nakhon Si Thammarat Spots School,. Retrieved February 13, 2025 from <https://www.nrtss.ac.th/content/vision/3>
- Panthong, P. (2017). *Problems and Guided Development of Central Curriculum 2551 in the Level of Basic Education of Teachers in Suphanburi Sports School*. An Independent Study for the degree of Master of Educational Administration. Burapha University. Retrieved from <https://buiir.buu.ac.th/xmlui/handle/1234567890/6866>
- Ramis, Y., Torregrosa, M., Viladrich, C., & Cruz, J. (2017). The effect of coaches' controlling style on the competitive anxiety of young athletes. *Frontiers in psychology*, 8. doi: 10.3389/fpsyg.2017.00572
- Saldaña, J. (2013). *The Coding Manual for Qualitative Researchers* (2nd ed). SAGE Publications.
- Simons, H. D., Van Rhee, D., & Covington, M. V. (1999). Academic Motivation and the Student Athlete. *Journal of College Student Development*, 40(2), 151-162.
- Sipe, B. S. (2020). Embedding Design Thinking in a Culture of Innovation at Two Community Colleges. *Community College Journal of Research and Practice*, 44(9), 657-676. doi: 10.1080/10668926.2019.1631230
- Suphanburi Sports School. (2014). *Visions and Missions*. Suphanburi Sports School,. Retrieved February 13, 2025 from https://www.spbss.ac.th/index.php?option=com_content&view=article&id=75&Itemid=478
- Tarndonrat, T. (2017). *Opinions on problems and needs of students regarding the teaching management of Phitsanulok Provincial Administrative Organization Sports School* Naresuan University. https://tdc.thailis.or.th/tdc/browse.php?option=show&browse_type=title&titleid=438524&query=%B0%
- Notification of Thailand National Sports University Re: Development Policy of Sports School under the organization of Thailand National Sports University, (2024). <http://www.tnsu.ac.th/web/web2/Downloadfile/policy.pdf>



- The United Nations International Children's Emergency Fund. (n.d.). *Strengthening education systems and innovation: Getting all children in school and learning takes strong, innovative education systems*. UNICEF. Retrieved April 3 from <https://www.unicef.org/education/strengthening-education-systems-innovation>
- Tingsabhat, S. (2011). *A Proposed Educational Model for the Development of Tennis Professional in Thailand*. A dissertation for the degree of doctor. Chulalongkorn University.
<http://doi.org/10.14457/CU.the.2011.765>
- Ubon Ratchathani Sports School. (n.d.). *Visions, Philosophy, Missions and Identity*. Ubon Ratchathani Sports School, . Retrieved February 13, 2025 from http://www.ubss.ac.th/datashow_54584
- Vincent-Lancrin, S. (Ed.). (2023). *Measuring Innovation in Education 2023: Tools and Methods for Data-Driven Action and Improvement*. OECD Publishing. doi: 10.1787/a7167546-en.