



Flipped Classroom Teaching in Physical Education: The Untold Experiences of Teachers and Students

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Abstract

This study delves into the lived experiences of teachers and tertiary students regarding the utilization of the Flipped Classroom in teaching Physical Education (P.E). Giorgi's phenomenological method was employed, and data were collected through validated, teacher-constructed semi-structured interviews with a total of 10 participants. To analyze the data, the three (3) steps of Giorgi's phenomenological approach were employed. The experiences of both teachers and students were synthesized into five themes. The study revealed that the use of the Flipped Classroom Approach in Physical Education was effective, as participants - both students and instructors - exhibited a strongly positive attitude toward it. Additionally, the in-class activities of the flipped classroom model enhanced students' learning and deepened their understanding of Physical Education Concepts. However, it is crucial to acknowledge that the success of this model is heavily reliant on technological infrastructure and internet accessibility. Therefore, it is imperative to provide students with appropriate guidance and support to mitigate any technical challenges that may arise. Improving the flipped classroom approach for teaching physical education (P.E.) at the tertiary level in the Philippines necessitates consideration various factors, such as cultural context, student needs, and available resources. Consequently, a set of proposed enhanced Flipped Classroom approach guidelines has been developed. These proposed guidelines aim to establish a culturally relevant, supportive, and engaging flipped classroom experience for tertiary-level physical education students in the Philippines, ultimately enhancing their learning and overall educational experience.

Keywords: Flipped Classroom Approach, lived experience, Physical Education, Tertiary students, Higher Education

Introduction

Interest in internet-based technologies within the field of education has increased. Electronic learning environments and online courses are being generated, employing intranets, websites, and computer-mediated communication in educational institutions (Williams, 2002). Blended learning, a method combining various learning tools such as electronic performance support systems, web-based courses, and real-time collaboration software with face-to-face classroom (Singh, 2003). Efforts to shift the focus of instruction from teacher-centered to learner-centered and blended learning are underway. The Stanford Center for Opportunity Policy in Education published case studies and a cross-case analysis of four California urban high schools practicing student-centered learning in June 2014. The study found that students in these schools, using a learner-centered strategy, outperformed most traditional schools employing lecture methods in their communities (Kaput, 2018). One of the learner-centered strategy being developed and employed to replace conventional lectures is the Flipped Classroom Approach.

The flipped classroom is a learning design that plays an important role in blended learning (Baepler et al., 2014). It utilizes asynchronous video lectures and practice problems as homework, with active group-based problem-solving activities in the classroom. Class time is dedicated to applying information covered in the online lecture. Since students view the lecture before class, contact hours can focus on problem-solving, skill development, and deeper understanding of the subject matter (Bergmann & Sams, 2012). Teachers can provide students with a wide range of learner-centered opportunities in class for greater teacher-to-student mentoring and peer collaboration (Prensky, 2010). The primary goal of "flipping a class" is to create deeper, more enriching learning experiences for students when the teacher is present to coach and guide them. The Flipped Classroom emphasizes higher-order thinking skills and application to complex problems (Bergmann & Sams, 2012).



This study's importance lies in predicting the experiences of Tertiary Students and Physical Education Teachers regarding the use of Flipped Classroom Approach in teaching Physical Education. The data gathered in this study serve as a guide for Physical Educators to enhance their teaching of Physical Education concepts, encouraging them to be effective and efficient in creating learner-centered activities. Additionally, it serves as a basis for feedback on the rollout and implementation of the new P.E. curriculum in its early stages, which could significantly contribute to processes aiding its improvement and further development.

In recent years, there has been a notable increase in the popularity of sports, fitness, and recreational activities among high school students. However, despite this trend, physical education classes seem to be losing value as students become increasingly disinterested and unmotivated to attend them. This lack of motivation is often accompanied by a loss of confidence in their abilities to perform physical activities. Additionally, many students report experiencing strong negative emotions such as anxiety, fear, and embarrassment when attending physical education classes (Siedentop, 1992). According to feedback from educators, the current pedagogical conditions are not conducive to achieving the desired goals of physical education. The challenges faced by physical education teachers are multi-faceted and varied, ranging from lack of resources and time to limited support from administration and parents. Academically, the emphasis on academic achievement and standardized testing has led to a decrease in the amount of time and attention devoted to physical education in many schools. As a result, students may be missing out on the benefits of physical activity, including improved physical health, emotional well-being, and academic performance. Despite these challenges, educators remain committed to finding creative solutions and advocating for the importance of physical education in schools (Locke, 1992). The conventional physical education class model, which follows a standard and normative approach, is no longer sufficient in terms of providing appropriate pedagogical influences for the physical development of students. Physical education teachers working within this system are unable to effectively organize theoretical and practical activities for their students, resulting in ineffective teaching practices being demonstrated (Bogdanov, 2007). The inadequacy of physical education in secondary schools has created a worrying situation where students are losing their motivation to participate in physical activities. The curriculum fails to encourage youngsters to attend physical education lessons, both during regular class hours and even during extracurricular activities. This has led to a crisis in the physical education sector of secondary schools, where students are not being provided with enough opportunities to engage in physical exercises that are essential for their physical and mental well-being (Gavrilov et al., 2005). When developing a new curriculum, it is imperative to take into account the unique and evolving needs of postmodern students. This requires a thorough rethinking of the approach to physical education in secondary schools. In order to provide students with meaningful and relevant education, it is necessary to craft a curriculum that is tailored to their specific needs. This includes a consideration of the changing social and cultural factors that influence their learning experience. By addressing these factors, we can create a curriculum that is both effective and engaging, and that provides students with the skills and knowledge they need to succeed in their future pursuits. (Tinning & Fitzclarence, 1992).

In higher education institutions, there has been an increasing number of reports for flipped learning in Physical Education. Flipped learning has been popular in the last 3 years as a mechanism of incorporating an active learning environment in classrooms and lecture halls. Reports were analyzed for emerging themes on the benefits and challenges of integrating this approach at the university level (Seery, 2015). However, additional research is needed to examine the influence of flipped classroom instruction on objective learning outcomes (Bishop, 2013).

During the COVID-19 pandemic, many students around the world have struggled with online learning and have only been able to achieve superficial knowledge (Nolan et al., 2021). To address this issue, it is important to find ways to meet the diverse needs of students and move beyond superficial learning experiences. One potential approach is to use the flipped classroom model, which allows for a more personalized education experience. The researcher aims to determine the effectiveness of the Flipped Classroom Approach in teaching Physical Education and to create guidelines for improving the model.

A theoretical Stance



This research study adopts a theoretical stance that avoids bias, data contamination, and subjective interpretations by not anchoring itself to any specific theory. Being qualitative in nature, this study does not require a theory to serve as its framework but aims to formulate enhanced guidelines based on the results. The researcher will employ Giorgi's descriptive Phenomenology, a tradition of inquiry focused on describing phenomena or the appearance of things as lived experiences (Speziale & Carpenter, 2007), particularly regarding the experiences of students and teachers in the use of the Flipped Classroom Approach in teaching Physical Education.

This study seeks to explore the experiences of tertiary students and teachers in utilizing the Flipped Classroom Approach in teaching Physical Education, with a focus on proper documentation. Subsequently, enhanced guidelines for the flipped classroom approach will be generated based on the responses of the key informants. The transcribed interviews conducted by the researcher will serve as the basis for substantiating the data conveyed by tertiary students and teachers regarding their experiences with the Flipped Classroom Approach in teaching Physical Education.

Qualitative research entails understanding and collecting diverse aspects and data. In this study, Giorgi's phenomenology approach will be utilized, involving three interlocking steps. The initial step in the analysis process will entail transcribing the recorded interviews in detail and extracting relevant field notes. To discern the meaning behind the lived experiences of tertiary students and Physical Education teachers utilizing the Flipped Classroom Approach, the interviewer will cross-check the accuracy of the transcripts by listening to the recordings and thoroughly reading them. Essentially, the researcher will need to "bracket" the answers and responses of the participants to analyze the phenomenon. Uncovering meanings in data requires researchers to be open to allowing unexpected meanings to surface without forcing them into preconceived themes. Researchers need to rediscover the disciplinary value of each meaning unit so that it can be more clearly expressed. The free imaginative variation method is a crucial tool for developing important insights within different fields. To use this method, one needs to carefully read the text, pausing and marking the spots where significant ideas or experiences are described. By doing this, one can identify a series of meaning units that group together similar experiences. After this, the researcher can re-describe and transform these meaning units to establish the essential structure of a sub-theme. Finally, the core meaning behind each sub-theme can be outlined into broader themes.

Philosophical Stance

This study is a qualitative inquiry that specifically focuses on the lived experiences of tertiary students and Physical Education teachers utilizing the Flipped Classroom Approach in teaching Physical Education. Qualitative research, according to Creswell (2007), is a means of exploring and understanding the meaning of how individuals or groups attribute to a social or human problem. The research process involves emerging questions and procedures, with data typically collected in the informant setting.

In this study, the researcher aims to discover the experiences of tertiary students and Physical Education teachers utilizing the Flipped Classroom Approach in teaching Physical Education. Similarly, the researcher aims to determine the essence of the lived experiences of the informants. The researcher will identify the informants and frame questions that extract the data needed for an in-depth understanding of their experiences. Furthermore, the research philosophies underpinning this study include ontology, epistemology, axiology, rhetoric, and methodology.

Ontological Assumption states that reality is subjective and multiple as perceived by the informant in the study (Creswell, 2008). In this study, ontological assumptions may include the following: First, Embodiment, recognizing that physical activity is inherently connected to the body and its movements, emphasizing the physical aspect of learning. Second, Subjectivity of experience, acknowledging that students have varied experiences and interpretations of physical activities. Third, the Assumption that mental and physical aspects of the body are intertwined, emphasizing that learning Physical Education should be holistic. Fourth, the Dynamic Nature of Learning, understanding that knowledge acquisition in Physical Education is a dynamic process, and recognizing that students construct knowledge through active engagement and reflection. Thus, the researcher can speculate that Tertiary Physical Education students and instructors may encounter several experiences of using the Flipped Classroom Approach in teaching Physical Education, which can be categorized systematically to present the essence of such



practices, leading to proposed enhanced guidelines that can help shape the design of instructional materials, discussions, and activities in Physical Education utilizing the flipped classroom model and can be universally adapted based on basic ontological concepts.

Meanwhile, epistemology is a term used to describe the branch of philosophy concerned with the nature and scope of knowledge (Encyclopedia of Philosophy, 2007) and is also referred to as the "theory of knowledge." It specializes in the scope, methods, and validity of knowledge by investigating what distinguishes justified belief from opinion, seeking to answer questions about what knowledge is and how it is acquired. Almost all human beings wish to understand the world they live in, and many construct theories of various kinds to give them a sense of it. From the standpoint of epistemology, it emphasizes how the researcher acquires knowledge and information about the experiences of tertiary students and teachers regarding the use of the Flipped Classroom Approach in teaching Physical Education. This approach serves as a venue for close collaboration between the researcher and the informant, allowing informants the freedom to share their experiences. The restrictions that the study may encounter could be used to determine the effectiveness of the Flipped Classroom in teaching Physical Education and as a scaffolding mechanism in developing enhanced guidelines for the Flipped Classroom approach based on the essence of the experiences.

On the other hand, axiology is defined as the philosophical study of value. It is either the collective term for ethics and aesthetics - philosophical fields that depend crucially on the notions of worth - or the foundation for these fields, and thus, similar to value theory and meta-ethics (Hart, 2011). As for axiological assumptions, according to Creswell (2008), values are personally relative and need to be understood. From this view, the factual and experiential aspects of students' learning experiences become essential components that contribute to the overall value system within Physical Education. The flipped classroom embraces students' individual contexts, recognizing their diverse backgrounds, abilities, and experiences. This aligns with an axiological stance that values inclusivity and diversity. By allowing students to engage with pre-class materials at their own pace, this approach accommodates different learning styles and preferences, fostering a sense of individual worth and respect for diverse perspectives. As students interact, discuss, and apply their knowledge collectively, they not only enhance their understanding of the subject's concepts but also cultivate values related to collaboration, communication, and mutual respect, which align with the axiological principles emphasizing the value of teamwork and shared experience. Moreover, the emphasis on experiential learning aligns with the axiological principles that value practical application and hands-on experiences.

Regarding the methodological approach, to gain a deeper understanding of the experiences of tertiary Physical Education students and Physical Education Teachers regarding the use of the Flipped Classroom Approach in teaching Physical Education, the Descriptive Phenomenological Method taught by Amedeo P. Giorgi (Giorgi, 2009) will be utilized. A series of methods will be employed to facilitate effective accounts of the informants' experiences. First, an interactive interview will be conducted and duly recorded, where informants will be asked a series of questions about their experiences in learning Physical Education Concepts utilizing the Flipped Classroom Approach. Then, the recordings will be transcribed using a simple paper and pen method. Next, to process the thematic analysis of the informants' responses, a dendrogram and coding method will be utilized. Lastly, the naturalistic method will be used in the overall question-and-answer process to ensure a steady flow of conversation and to focus on real-life experiences as informants convey their insights on the given questions concerning their learning experiences. Through these processes, informants can fully convey their experiences in learning Physical Education utilizing the Flipped Classroom Approach, and the investigator can fully harness the essence of what they will be sharing.

Meanwhile, rhetoric is the art of persuasion (Aristotle 1946, Book I.2. as cited in O'Neill, 1998). The rhetorical structure of the research is how it persuades the reader that what is presented is valuable. Different types of research reports have specific formatting expectations, such as APA style. Furthermore, specific expectations exist for different types of research, such as ethnography, grounded theory, case study, etc. The researcher should use a specific rhetorical assumption, which is the basis for the structure of the research report. In qualitative research, the overall rhetorical assumption is that the researcher is not seeking the truth or omniscience but instead reports reality through the eyes of the research informants.



In this research, the researcher aims to objectively report the information gathered from the informants. The research does not focus on collecting quantitative data and conducting statistical tests. Instead, it is more humanistic, emphasizing detailed description and interpretation of results based on interviews and observations. The writing style will be thorough, descriptive, and interpretive. The study will be written in the first-person narrative to indicate and showcase the passion and active involvement of the investigator. To facilitate better understanding between the investigator and the informants, direct and simple terms will also be used.

Objective of the Study

This study aims to explore the experiences of tertiary students and Physical Education teachers utilizing the Flipped Classroom Approach in teaching Physical Education at the Cebu Technological University-San Remigio Extension Campus, Tambongon, San Remigio, Cebu.

Methodology

Design

This qualitative research employed the Descriptive Phenomenological Method taught by Amedeo P. Giorgi, based on Husserl's descriptive phenomenological philosophy as an alternative epistemology for human science research. In broad terms, the purpose of phenomenology was to describe phenomena, or the appearance of things, as lived experience (Speziale & Carpenter, 2007). Giorgi's phenomenological research design involved a systematic and rigorous approach to exploring individuals' lived experiences. Lived experiences involved the immediate consciousness of life's events before reflection and without interpretation, influenced by internal or external factors. It was the lived experience that gave meaning to everyone's perception of a particular phenomenon and thus presented to the individual what was true or real in his or her life (Giorgi, 1997 as cited in Penner & McClement, 2008). A phenomenological analysis did not aim to explain or discover causes; instead, its goal was to clarify the meanings of phenomena from lived experiences. As such, phenomenology offered an important shift from a positivist cause-effect focus to one of human subjectivity and discovering the meaning of actions (Giorgi, 2005).

Environment

The study was conducted at Cebu Technological University-Daanbantayan Campus-San Remigio Extension, Tambongon, San Remigio, Cebu. Established in 2013, the university marked an important milestone for the people of San Remigio by providing them with the first opportunity for formal tertiary education. Initially offering the Bachelor of Secondary Education (BSEd) program in its first year of operation and later introducing the Bachelor of Science in Industrial Technology (BSIT) program majoring in Electronics in the second year, the university continued to grow over time, eventually boasting a student population of over 1,000. The university comprised two departments: the College of Education and the College of Technology and Engineering. The College of Education offered three programs—Bachelor in Technology and Livelihood Education (BTLEd), Bachelor of Secondary Education Major in Mathematics (BSEd-Mathematics), and Bachelor of Elementary Education (BEEd). The College of Technology and Engineering offered three programs—Bachelor of Industrial Technology Major in Electronics Technology (BIT-ET), Bachelor of Science in Hospitality Management (BSHM), and Bachelor of Science in Industrial Engineering (BSIE). The university had already produced globally competitive professionals and board passers. Under the guidance of the university President and Key Officials, in coordination with Local Government Officials, new buildings were being constructed with the aim of achieving the vision and goals of the university.

Informants

The informants were selected based on the following inclusion and exclusion criteria: For student participants, they had to be enrolled in the College of Education's three programs—Bachelor in Technology and Livelihood Education (BTLEd), Bachelor of Secondary Education Major in Mathematics (BSEd-Mathematics), and Bachelor of Elementary Education (BEEd). Additionally, students from the



Bachelor of Science in Hospitality Management had to have experienced the Flipped Classroom Approach in learning Physical Education for at least one semester. Physical Education instructors from the same university who had used the Flipped Classroom Approach for at least one semester were additional informants of this research. There were ten (10) total informants, consisting of two (2) from each of the mentioned groups. All informants from these groups who were exposed to the Flipped Classroom Approach but had more than five absences in class were excluded. The inclusion and exclusion criteria stipulated helped the researcher distinguish the informants who could share real lived experiences. They were also instructed to answer the questions sufficiently. The identities of the students who served as informants in this study were treated with confidentiality in compliance with the research's ethical standards.

Instruments

The main instrument that the researcher used in the study was an interview guide (semi-structured interview) focusing on the experiences of using the Flipped Classroom Approach in teaching Physical Education. An interview guide was a structured set of questions and topics designed to facilitate a qualitative research interview. It provided a framework for the interviewer while allowing flexibility for in-depth exploration. Notably, the semi-structured interview was a qualitative research method that combined elements of both structured and unstructured interviews. This approach aimed to gather in-depth qualitative data while maintaining some level of consistency across interviews. Methodologically, the researcher used the interview guide as a reference in framing questions based on the answers received during the actual interview. The structured interview questions were validated by three (3) qualitative research experts and professors from schools and universities. Lastly, the qualitative data gathered was used as the method of evaluation.

Data Collection Procedure

The study had the following stages: pre-data gathering (research permission, informants' orientation), actual data-gathering (actual interview and recording), and post-data gathering (review of notes and recordings). In the procedure for collecting the data needed, the researcher followed the basic protocol to ensure credibility and transparency.

Pre-Data Gathering. The researcher furnished a letter to ask permission to conduct a study within the school premises, which was sent to the Campus Administrator for approval. After the permission for the conduct of the study was approved, the researcher gave the consent-assent form to the respondents and thoroughly explained it to them. The researcher also provided a letter to the informants containing vital information about the study before the interview schedule. The participants of the study were not involved in any physical or emotional risks. Furthermore, the students did not receive any direct benefit from the study.

Actual Data Gathering. On the actual day of the interview, the researcher chose a quiet and well-ventilated room to ensure that the informants felt comfortable. The researcher also made sure that they had no pending or incoming activities and that their time was specifically intended for the interview. Then, before each interview, the researcher initiated a friendly conversation by asking for a series of background information, which was later used to introduce them in the audio recordings. To ensure that confidentiality was duly applied, the researcher did not include any names in the process; instead, a coding scheme was assigned to represent each informant.

Prior to the actual interview, the researcher sincerely asked for the informants' approval to audio record the process. Upon approval, the researcher noted the time and provided a cue to begin with the basic orientation, eagerly introducing the beautiful nature of the study and explaining the purpose of the interview, wrapping up 15-20 minutes before it was scheduled to end. Strategically, to cater specifically to the data needed for the study, the researcher personally ensured that all questions listed in the interview protocol were conveyed. Lastly, the researcher also jotted down notes of statements that needed to be written down just in case the audio recordings were not very clear.



Post-Data Gathering. The study data was handled with great confidentiality and was discarded as soon as the study was finished. Digital files were deleted, while hard copies were shredded and properly disposed of. Results of this study could be used in publication and presentations. If results of this study were published or presented, individual names and other personally identifiable information were not used. The participants had the choice to withdraw from the study, which did not affect their scores or grades.

The finished manuscript of the study underwent a review by the thesis reader for the final checking of grammar and language-related technicalities.

Data Analysis

Giorgi's phenomenology approach was used in this study, consisting of three interlocking steps: 1) phenomenological reduction, which meant putting aside past knowledge, all judgments or beliefs about the phenomenon encountered, and taking nothing for granted in everyday reality; 2) the description approach, which was limited to what was given, and it was suggested that a sufficiently rich description would include an intrinsic account of the phenomenon; and 3) understanding a particular context, where searching for its essence could often reveal the most consistent meaning across different interpretations.

In this study, the first step in the analysis process involved transcribing the recorded interviews in detail and then extracting relevant field notes. To discern the meaning behind the lived experiences of Tertiary students and Physical Education teachers utilizing the Flipped Classroom Approach, the interviewer cross-checked the accuracy of the transcripts by listening to the recordings and reading them thoroughly. Essentially, the researcher needed to "bracket" the answers and responses of the participants to analyze the phenomenon. To uncover meanings in data, researchers had to be open to allowing unexpected meanings to surface without forcing them into preconceived themes. Researchers needed to rediscover the disciplinary value of each meaning unit so that it could be more clearly expressed. The free imaginative variation method was a crucial tool for developing important insights within different fields. To use this method, one needed to carefully read the text, pausing and marking the spots where significant ideas or experiences were described. By doing this, one could identify a series of meaning units that grouped together similar experiences. After this, the researcher re-described and transformed these meaning units to establish the essential structure of a sub-theme. Finally, the core meaning behind each sub-theme was outlined into broader themes.

Ethical Considerations

This study has been submitted, reviewed, and approved by the University of the Visayas Institutional Review Board. The three major principles of ethics were strictly observed during the data collection process such as respect for persons, beneficence, and justice.

Results And Discussion

The Informants Profile

This presents the profile of the informants in terms of age, sex, educational profile, and the number of semesters they have experienced using the Flipped Classroom approach.

Table 1
 Student Profile and the number of semesters they have experienced using the Flipped Classroom approach

Participants	Age	Sex	Course & year	No. of semesters
01	20	Female	BTLEd – 2 nd year	2
02	21	Male	BSEd Math- 2 nd year	2
04	20	Female	BEEd – 2 nd year	2
05	20	Male	BSEd Math- 2 nd year	2



07	20	Male	BSHM – 2 nd year	2
08	21	Female	BSHM – 2 nd year	2
09	20	Female	BEEEd – 2 nd year	2
10	20	Female	BTLEd – 2 nd year	2

Table 2

Teacher's profile and number of semesters utilizing the Flipped Classroom Approach in teaching P.E

Participants	Age	Sex	Position	No. of semesters
03	24	Female	Part-time Instructor	4
06	25	Female	Part-time Instructor	3

Untold Experiences of the Teachers and Students

The experience of teachers and students in the use of a flipped classroom approach in teaching Physical Education was explored using Giorgi's descriptive phenomenological analysis. The researcher had undergone the process of identifying and categorizing data which includes redefining and restructuring meaning units into subthemes. This helps to extract the core meaning that lies behind each subtheme, which can then be grouped into overarching themes. This methodical approach helps researchers to analyze and draw meaningful insights from complex data sets. All findings were summarized into five themes.

Theme 1: Frame of Mind Towards Flipped Classroom

The flipped classroom is perceived differently by students and teachers. Some consider it a transformative approach that boosts engagement, encourages active learning, and facilitates a deeper understanding of concepts. Others approach the flipped classroom with doubt or reluctance, as they see it as a departure from traditional teaching methods that require significant changes in teaching practices. Attitudes towards the flipped classroom can vary from enthusiasm and hopefulness to prudence and anxiety, depending on personal perspectives, experiences, and beliefs about teaching and learning. Not all concepts are best taught using the same techniques; as such, some things are still taught traditionally, some concepts are taught through student discovery, and some through the flipped classroom approach. We look at the exit we want and the plan thinking of the best methods to teach the students (Philip Kurbis (Munich International School), 2012).

Sub-theme 1.1 Pedagogical Benefits

Pedagogical benefits refer to the advantages or positive outcomes associated with a particular teaching method or approach. In the context of education, it typically focuses on how a specific practice or teaching approach positively impacts student learning outcomes and enhances student engagement and overall educational experience.

(P01,1-3) "Murag kuan maam, kanang, kana gae nga pwede ra ako'y makapili og oras sa pagtuon sa leksyon ug pagtubag sa mga activities. Kuan sad maam kanang makabalik-balik ra sad ko og tan-aw sa mga lecture kon unsa man ang kinahanglanon, nga nagtabang sa akong pagkabalo ug pagkat-on sa mga concepts."

("I can have a flexible time in studying the lesson and answering activities and I can rewatch lectures whenever I need to which helps me in understanding and learning the concepts.")

(P02,1-4): "Flipped Classroom Approach means that I can access given instructional materials like video presentations, video lectures, and activities anytime and anywhere and like pwede sad ko ka search ug further research about the concepts that I don't understand, ingana man guro na maam, hehe"



("Flipped Classroom Approach is that I can access given instructional materials like video presentations, video lectures, and activities anytime and anywhere and I can do further research about the concepts that I don't understand".)

(P03,1-3): "Flipped Classroom Approach ay it's like a way, or hmmn, an approach diay na nakakatulong sa mga guro sa pagbibigay-pansin sa aktibong pag-aaral sa pamamagitan ng pagbibigay sa mga estudyante ng mga presentation at mga recorded lecture, and ang mga estudyante ay nag-aaral sa kanilang sariling takdang oras."

("Flipped Classroom Approach is a way of assisting teachers in prioritizing active learning through providing students with presentations and recorded lectures, where students learn at their own pace.")

(P05,1-4): "Hmmm, For me man ma'am, no? Flipped Classroom is a way of teaching where students are given the freedom to learn at their own pace. Flexibility and the idea that I can learn or study in my own space are what I liked about the Flipped Classroom approach."

(P07,1-2): "It is very convenient for those students who like self-studying and self-learning. Ingana ma'am, pwede ra na sa?"

(P09,1-2): "Flipped Classroom Approach gives convenience to students since they were able to study at their own pace."

The flipped (or inverted) classroom is a blended learning approach that inverts the traditional or conventional way of teaching and learning structure (O'Flaherty & Phillips, 2015). In flipped learning, didactic lectures, which conventionally take place during face-to-face time, are recorded in advance, and made for students to watch and study before class, and during class time active learning strategies provide opportunities to deepen, extend, and apply student understanding of the recorded material (Cheng & Weng, 2017; Roehl, Reddy, & Shannon, 2013; Zainuddin & Halili, 2016). Active learning strategies focus on student-centered activities that require students to engage in things actively. As a result, students are encouraged to think about and reflect on what they are doing, which helps to deepen their understanding of the topic (Bonwell & Eison, 1991; Misseynani, Lytras, Papadopoulou, & Marouli, 2018). Blended learning approaches also tend to be received favorably by students as they offer flexibility and choice over when and how they learn, with access to different modes of study, and a range of multimodal learning resources (Keppell & Riddle, 2011).

The Flipped Classroom Approach empowered the students to take ownership of their learning journey. Having greater control over the pace and depth of their learning leads to self-direction and self-regulation. The flexibility of the approach accommodated the diverse learning styles, preferences, and abilities, making it more inclusive and accessible to a wider range of students. It allowed diverse learners for individualized learning experiences.

The essence of Physical Education's pedagogical benefits lies in its impact on students' physical, cognitive, and socio-emotional development. This involves active engagement, which promotes active learning in physical education classes. Such engagement helps students to connect with the subject matter through physical activities, promoting a lifelong commitment to physical fitness and well-being. It also entails creating inclusive and accessible learning environments that cater to diverse student needs and abilities, ensuring that all students have equal opportunities to participate and succeed.

Sub-theme 1.2: Adaptation Challenge

Adaptation challenges in the context of physical education refer to the difficulties that students and teachers may face when trying to adjust to and implement new teaching methods or approaches. These challenges may arise due to various factors, such as cultural differences, lack of resources, and differing learning styles. In physical education, adaptation challenges may include issues related to the implementation of the flipped classroom approach, the use of technology in teaching, and the integration of inclusive practices to cater to students with different abilities. Overcoming adaptation challenges



requires careful planning, effective communication, and a willingness to be flexible and open to feedback and suggestions from all stakeholders involved.

(P10,1-3): "After weighing the benefits and drawbacks, I might choose a conventional lecture style to guarantee real-time communication and prompt doubt clarification. But we accept and adjust what the school will introduce."

*(P09,1-2): "Flipped Classroom is okay, okay rag gyud siya man, pero murag nageed pa ug many adjustments, especially sa teacher-student interaction part ma'am ba."
("Flipped Classroom is okay but just needed many adjustments, especially on the teacher-student interaction part.")*

*(P07,1-3): "I like the Flipped Classroom Approach but with the proper support from the school or the government like tagaan me ug a free Wi-Fi spot para maka-study, aww, ayus kayo na."
("I like the Flipped Classroom Approach but with the proper support from the school or the government like giving a free Wi-Fi spot where we can study.")*

(P04,1-2): "If I were to take the class again, I would prefer the Flipped classroom approach but with the increase of personal guidance like the traditional way."

Despite popular enthusiasm and a somewhat reasonable rationale, flipped classroom approaches could not yet be considered the evidence-based (Pawson, 2006) approach; there is little research on the flipped classroom approach and none of it relies on particularly rigorous designs. Contrasting the amazing Google popularity, a search of the ERIC database finds only eight articles that use the phrase in their title, abstract or keywords, and only two are peer-reviewed (ERIC, 2013). The flipped classroom approach is under-evaluated, under-theorized, and under-researched in general.

The implementation of the flipped classroom approach in teaching physical education (P.E.) poses adaptation challenges for both educators and students. Educators faced difficulties in adjusting to this new teaching method, while students had issues with self-directed learning and accessing pre-class materials. These showed that some students find comfort in the familiar routine and structure that the traditional teaching method offers. To address these challenges, ongoing support, training, and collaboration can be provided to successfully integrate the flipped classroom model into teaching P.E.

It's essential to recognize that preferences can vary among individuals, and not all students will share the same reasons for appreciating the flipped classroom approach. Some may find the aspects of the traditional teaching approach supportive of their learning preferences, while others prefer more modern and innovative teaching methods like the flipped classroom approach.

Sub-theme 1.3: Positive Attitudes

Positive attitudes refer to a favorable or optimistic perspective towards a specific situation, person, or thing. It involves an individual's emotional response, beliefs, and behavioral tendencies toward a particular subject. A positive attitude can help individuals cope with challenges, improve relationships, and enhance overall well-being. It can also contribute to a more positive and productive work environment.

*(P01,1-3): "I would like to choose Flipped Classroom; Nindut kayo ang flexibility na iya ma-offer man but needed lang real-time interactions and hands-on experience naay guidance gyod ba."
("I would like to choose Flipped Classroom; I like the flexibility it offers but with a little bit more real-time interactions and hands-on experience with guidance.")*

*(P03,1-5): "If P.E subject mas better ang flipped classroom format since P.E. kay more on performing man or other engaging activities. Para mas easy and convenient sad sa teacher na before sila magpaperform much better if magpaview ug videos daan sa students para makita sa teacher if naa bay nasabtan or nakasabot bag yod sila"
("I think in P.E., the Flipped Classroom Approach is a better way of teaching since P.E. is more focused on performing and other engaging activities. And to make it easier and convenient for*



teachers to see if the students learn and understand, it's much better to let the students watch videos before any performance.”).

(P06,1-3): *“I would go for Flipped Classroom since integrating video viewing and presentations before a Scheduled discussion is very convenient for me as a P.E instructor.”.*

(P08, 1-3): *“I would prefer a Flipped Classroom format kay despite the challenges, Murag feel nako na kuan, like it allows me to understand deeply, and it caters to different types of learning styles. charr”.*

“I would prefer a Flipped Classroom format because despite the challenges, I feel that it allows me to understand deeply, and it caters to different types of learning styles.”

(P02,1-5): *“. I prefer a flipped classroom because of the idea that even if I can't personally interact with my instructor during discussion, and I can't clarify things easily, it can't overshadow the flexibility, convenience, and emphasis it gives on practical skills that can better prepare students for real-world scenarios and applications in sports.”*

According to research undertaken over the past decade (Gauci, et al., 2009; Lord, Prince, Stefanou, Stolk, &Chen, 2012; Prince, 2004; Thaman, Dhillon, Sagggar, Gupta, & Kaur, 2013) students feel more competent when they are active participants in the creation and dissemination of knowledge than when they are passive recipients of knowledge dictated by an instructor, as done through traditional lectures. By catering to students' need for competency, the flipped classroom approach helps them to integrate values that are taught within the course.

The positive attitudes of the participants of the flipped classroom approach in the context of Physical Education were indicative of its potential to foster a dynamic and supportive educational environment, in which educators and students alike can collaboratively contribute toward the success and continual refinement of the learning experience. The affirmative attitude of the participants toward this teaching methodology provides a compelling indication of the possibility of cultivating an environment in which students can engage more actively and effectively in their academic pursuits.

In essence, the positive attitude towards the flipped classroom approach reflects the optimistic belief of the Participants in the ability of the approach to enhance teaching and learning experiences, promote student engagement and achievement, and foster a dynamic and collaborative educational environment.

Sub-theme 1.4: Enhanced Learning

Enhanced learning is the key to unlocking the full potential of students. It involves improving the quality and effectiveness of learning experiences and outcomes by employing advanced technology, innovative teaching methods, personalized instruction, and collaborative learning. Enhanced learning provides students with a stimulating, engaging, and meaningful learning experience that promotes critical thinking, problem-solving, and creativity. It prepares students for success in their future endeavors and helps them achieve their goals. Therefore, it's imperative to embrace enhanced learning and leverage its benefits to create a brighter future for our students. Let's work together to enhance the learning experience and ensure that every student reaches their full potential.

(P01,1-4): *“The Flipped classroom has deepened my understanding of physical education by allowing me to engage with pre-class materials at my own pace. For example, watching instructional videos before class helped me grasp complex techniques like proper form in doing squats.”.*

(P02,1-5): *“In-class activities in the flipped classroom have enhanced my learning by providing hands-on experiences that reinforce theoretical concepts. For instance, during group discussions and practical exercises, I was able to apply the principles of biomechanics learned from the pre-class readings to analyze and improve my running form.”.*



(P03,1-5): *"The flipped classroom approach has redefined the teaching strategies in Physical Education by integrating technology and active learning. For instance, using online platforms for pre-class readings and quizzes has allowed me as a P.E teacher to focus on facilitating hands-on activities during class, creating a more engaging and dynamic learning environment."*

(P04,1-5): *"Through In-class activities in the flipped classroom approach, I've developed stronger teamwork and communication skills. For instance, collaborating with classmates on group projects like designing fitness challenges required effective communication and coordination, contributing to a more holistic learning experience for us."*

(P05,1-5): *"The flipped classroom model has encouraged me in active participation and critical thinking during in-class activities. Like, engaging in problem-solving tasks related to exercises theories helped me apply theoretical concepts to real- life scenarios, deepening my understanding of mental skills training."*

(P06,1-6): *"The Flipped Classroom approach has revolutionized the teaching methods in Physical Education by allowing for more personalized instruction. For example, pre-class materials such as instructional videos on proper form in different ways to do push-ups as a teacher I just focused on individualized feedback during in-class practice sessions, enhancing our understanding and execution of the exercise."*

(P07,1-5): *"The Flipped Classroom approach has transformed my learning experience in physical education by fostering peer collaboration during pre-class and in-class activities. For example, participating in group projects like designing fitness circuits allowed me to exchange ideas with my classmates and gain new perspectives on exercise programming."*

In Constructivist Theory, knowledge is not waiting to be discovered but rather it is constructed by humans by interaction with the world and with each other. Learner collaboration, interaction, and engagement are the foundations of the Constructivist Theory of learning. Collaborative, interactive activities have been touted to be most effective at helping students reach a higher level of understanding (Butzler, 2014)

Flipped Classroom Approach enhanced students' learning and understanding of physical education concepts through active engagement with pre-class materials, allowing for personalized learning at their own pace. This approach encourages practical application of concepts, leading to a deeper understanding of Physical Education principles.

At its core, the essence of the flipped classroom is to create an environment where students are actively engaged, motivated, and empowered to become lifelong learners capable of critical thinking, collaboration, and self-directed learning.

Theme 2: Soft Spot on Flipped Classroom

This encapsulates the positive perceptions, experiences, and benefits that educators and students associate with the flipped classroom model. These favorable aspects contribute to increased engagement, deeper learning, and improved academic outcomes in the educational setting. In the flipped classroom, typical lecture and homework elements are reversed. The concept of a flipped classroom draws on such concepts as active learning, student engagement, hybrid course design, and course podcasting. The value of a flipped class is in the shifting of class time into a workshop where students can inquire about lecture content, test their skills in applying knowledge, and interact with one another in hands-on activities. Although implementing a flipped classroom places different demands on faculty and forces students to adjust their expectations, still it has the potential to bring about a distinctive shift in priorities— from merely 12 covering material to working toward mastery of it (EDUCAUSE Learning Initiative, 2012).

Sub-theme 2.1 Active Engagement



Students often appreciate the opportunity to engage actively with course materials through pre-class assignments, interactive activities, and hands-on projects. The flipped classroom encourages student participation and fosters a deeper understanding of concepts through active learning experiences.

(P01, 1-3): "Madelop akong social skills ani ba kay sige man collaborate sa akong classmates nya it also promotes active learning kay ma-increased man ang engagement in practical exercises and actual performance."

("It develops my social skills by collaborating with my classmates and it also promotes active learning through increased engagement in practical exercises and actual performance.")

(P03, 1-5): "what I liked about flipped classroom? Hmm, parang ginagawang mas madali at mas magandang ang trabaho ng guro. Like in this paraan, may mga ideya at kaalaman na ang mga estudyante bago pa man ang talakayan at ang tungkulin ng guro ay palalimin ang kanilang pag-unawa sa pamamagitan ng pagtugon sa kanilang mga tanong at pagtutuo sa pagtama o pagbibigay ng feedback sa paraan ng pagganap ng mga estudyante sa ibinigay na gawain"

("What I liked about Flipped Classroom is that it makes the teacher's work easier and lighter. Wherein, students already have ideas and knowledge before the discussion and the teacher's job is to deepen their understanding by answering their questions and focusing on correcting or giving feedback to the way students perform the given exercise.")

(P07, 1-3): "What I liked about Flipped Classroom is that I can learn faster since I can look for more references freely and in terms of reviewing lessons kay dali ra ko kareview, it's very convenient gyud sya because I have all the resources to rewatch."

("What I liked about Flipped Classroom is that I can learn faster since I can look for more references freely and in terms of reviewing lessons it's very convenient because I have all the resources to rewatch.")

An engaged student is someone who is fully invested in their academic pursuits and has a strong sense of purpose and motivation. They approach their studies with enthusiasm, commitment, and focus, and are deeply absorbed in the learning process. They see themselves as an integral part of their learning communities and take an active role in shaping their educational experiences. By being engaged, students are more likely to achieve their goals, develop important skills, and enjoy a fulfilling and rewarding academic journey." (Baron & Corbin, 2012, p. 763). It is hard to discuss the motivation of students and growing new teaching models without the terms 'engaged', 'engagement', or 'student engagement' surfacing. It is important to note that student engagement is a multifaceted and often contested concept. With a variety of ideas and perspectives swirling around the topic, it can be difficult to navigate. As educators, it is our responsibility to create learning environments that truly engage our students. By doing so, we can help them reach their full potential and achieve success in their academic pursuits.

Most of the students noted that they can engage more in physical activities and practical exercises, fostering active learning. As observed, students and teachers also agreed that Flipped Classroom can optimize time, allowing instructors to focus on skills development and addressing individual student needs during discussions. Since students already know the topics through the pre-class activities, the in-class activities are focused more on performance and giving feedback to the way students perform.

In essence, active learning embodies a student-centered approach to education that prioritizes engagement, participation, and critical thinking. By actively involving students in the learning process, educators create dynamic and enriching learning environments that promote deeper understanding, higher retention of information, and lifelong learning skills.

Sub-theme 2.2 Individualized Learning

Active learning allows for personalized learning experiences tailored to individual student needs, interests, and learning styles. Educators can incorporate diverse instructional strategies, resources, and activities to accommodate different learning preferences, ensuring that all students have opportunities to succeed.



(P02,1-4). "What I like about the Flipped Classroom Approach is that I can access given instructional materials like video presentations, video lectures, and activities anytime and anywhere and I can do further research about the concepts that I don't understand.

(P04, 1-4). "I like the Flipped classroom approach because it allows me to learn at my own pace. I can pause, rewind, and rewatch the videos as many times as I need to fully understand the material."

(P10, 1-2): "I value the flipped classroom's flexibility since it lets me go over the content at my speed."

(P06,1-4): "What I liked about the Flipped Classroom approach is that it is a student-centered approach since there is no one to guide the students to go through the given videos and lecture presentations which allows the students to explore and find other references that could help them understand the given topics."

Changing the mode of delivery of a transmissive class but changing nothing else is unlikely to result in significant gains in learning; when researchers have changed media but not pedagogy in the past, on average we see no significant difference (Russell, 2013). The move from a traditional lecture to presenting that same lecture online is unlikely to result in learning differences if nothing else changes. However, by encouraging students to manipulate the pace of these videos we argue there may begin in learning, as learner pacing can help manage cognitive load (Clark, et al., 2005). Learners can pause, rewind, fast forward, or skip any parts of a lecture video to better manage their working memory. Meta-analysis of 43 studies by Ginns (2005) found that learner pacing may even mitigate against some poor uses of text and graphics where poor media choices have been made. With this, student's own pacing in studying pre-recorded lectures may help lighten the cognitive load and boost learning in a flipped classroom environment

Many of the students noted that they like the idea of having the flexibility to review instructional materials at their own pace and in their own space. Personalization enables students to progress through the curriculum at a pace that suits their individual needs and abilities. This may involve providing additional support or enrichment opportunities, allowing students to accelerate or decelerate their learning as needed.

In essence, personalization in education reflects a student-centered approach that values and respects the individuality of each learner. By personalizing the learning experience, educators can empower students to reach their full potential, foster a love for learning, and prepare them for success in school and beyond.

Sub-theme 2.3 Increased Participation

Increased participation in education refers to a higher level of engagement, involvement, and active contribution from students in learning activities, discussions, and classroom interactions. It implies that students are more actively engaged in their learning process, demonstrating a willingness to participate in class activities, share their ideas, ask questions, and collaborate with peers. Increased participation is often seen as a positive indicator of student engagement, motivation, and interest in the subject matter. It can lead to deeper learning, improved academic performance, and a more enriching learning experience for students. Additionally, increased participation fosters a sense of ownership and responsibility for learning outcomes, as students become more actively involved in shaping their educational experiences.

(P01,1-3): "Madedevelop akong social skills ani ba kay sige man collaborate sa akong classmates nya it also promotes active learning kay ma-increased man ang engagement in practical exercises and actual performance."

("It develops my social skills by collaborating with my classmates and it also promotes active learning through increased engagement in practical exercises and actual performance.")



(P04,1-2): *"What I liked about the use of Flipped Classroom, kuan maam, kana gurong increased interaction sa akong mga kauban na students, mao ra guro na maam."*
(*"What I liked about the use of Flipped Classroom is it increased interaction with co-students."*)

(P07,1-3): *"What I did to address this issue is to watch the lessons with my classmates. This strategy not only solves my problem it also helps me in my learning since watching with my classmates it allows us to collaborate."*

In tertiary education, students tend to show learning behaviors that are deemed important and appreciated by individuals who hold a significant position in their lives, such as instructors, peers, or parents. This is because students feel a sense of belongingness or would like to establish a connection with these individuals. (Ryan & Deci, 2000a, 2000b). The extent to which students' need for relatedness is met by the learning environment is central to the integration of promoted values (Beachboard, Beachboard, Li, & Adkison, 2011; Niemiec & Ryan, 2009; Ryan, Stiller, & Lynch, 1994). The flipped classroom approach emphasizes active participation and autonomy, which can foster an environment that encourages students to form small learning groups. This approach can increase the level of peer-to-peer relatedness, which is critical for effective learning. Additionally, the flipped classroom approach eliminates the need for large lecture theaters, allowing for smaller classes and classrooms. As a result, students can benefit from greater interaction with their instructors, enhancing their experience of relatedness to the instructor. These experiences of relatedness can positively impact the students' integration of values promoted within the course. In-class activities can promote collaboration, teamwork, and a sense of community among students. Active Participation during practical sessions can contribute to a more inclusive and motivating learning environment.

In essence, increased participation in education creates a vibrant and dynamic learning environment where students are actively engaged, collaborative, and motivated to learn. By fostering a culture of participation, educators empower students to take ownership of their learning, develop critical thinking skills, and cultivate a lifelong love of learning.

Theme 3: Feel Distaste for Flipped Classroom

The statement implies that certain areas or aspects within the flipped classroom model may have the potential to cause difficulties or limitations which could be considered as weaknesses or vulnerabilities. It's important to acknowledge and understand these concerns, as they can provide valuable insights into potential challenges and areas for improvement in the flipped classroom model. Identifying and addressing this skepticism is crucial for the successful implementation of the flipped classroom model. Teachers need to be aware of these potential challenges and develop strategies to mitigate them, ensuring that all students can benefit from the flipped classroom approach. The students who are used to the conventional way of teaching may face some problems in getting used to this new model and adapting themselves. If videos prepared by teachers for student viewing are difficult to understand, it may hinder their ability to learn and understand the concepts. (Talbert, 2012; 2).

Sub-theme 3.1 Limited Interaction

The term "limited interaction" is commonly used to describe situations where there are limitations or restrictions on the extent or quality of interactions between individuals or entities. This term can be applied to a variety of contexts, such as social interactions where there may be barriers to communication or technological interfaces that limit the ability to engage with others. Additionally, it can refer to educational settings where there may be constraints on the amount of interaction between students and instructors or among peers.

(P01,1-2): *"Naglisud ko sa kakuwangan sa real-time na interaction sa mga teachers nya kuan sad, kanang wa gae guidance sa pagperform sa mga activities"*
(*"The lack of real-time interaction and hands-on experience with direct guidance was also a challenge for me."*)



(P02, 1-2): *"It also frustrates me that I can't directly ask questions and have to wait for the scheduled online discussion before I can get the answers."*

(P04, 1-2): *"Di ko ganahan sa part na limited kayo ang direct instruction from my instructors. Makalagot ba, haha"*

"What I disliked about it is having limited direct instruction from my instructors"

(P10, 1-3): *"It's hard to remain motivated when studying on your own and occasionally becoming confused about a particular issue without the teacher's prompt explanation."*

The flipped classroom will help students learn to correct misconceptions and organize their new knowledge by providing an opportunity for students to have immediate feedback from peers and the instructor. Furthermore, the immediate feedback that occurs in the flipped classroom also helps students recognize and think about their own growing understanding (Brame, 2013).

Many of the students noted that in the Flipped Classroom model, the amount of direct interaction between the instructor and each student is lesser compared to the traditional model, especially in the pre-class activities.

It is essential to acknowledge that by limited interaction, students take greater responsibility for their learning in a flipped classroom, as they are actively engaged in the learning process and empowered to take charge of their educational journey.

Sub-theme 3.2: Student Accountability and Integrity

Students' accountability and integrity refer to the responsibility and honesty that students are expected to demonstrate in their academic endeavors. Students are accountable for their actions, behaviors, and academic performance. This includes attending classes regularly, completing assignments on time, actively participating in class discussions and activities, and striving to achieve their learning goals. Integrity in academic contexts encompasses honesty, fairness, and ethical conduct. Students are expected to submit their original work, give proper credit to sources when using others' ideas or information, and uphold academic standards of honesty and integrity.

(P08, 1-3): *"However, to keep up with the materials before class knowing the many temptations in using the internet is very annoying for me knowing that I don't have a strong sense of self-discipline. Mas nindut man gud mag Facebook nalang maam nya one touch away ra, hehe"*

(P02, 1-3): *"What I dislike about the Flipped classroom approach is that I got easily distracted while using mobile phones or the internet. Ang ML ug Tiktok maam sgeg panguhit, haha. The idea that I can easily review or rewatch the lesson, made me procrastinate more."*

(P09, 1-2): *"The least beneficial would-be giving quizzes online since the essence was lost because students can easily search the answers on the internet.way gamit gyod, as in wala"*

According to experts (Cole, Field, and Harris (2004, p. 67), motivation to learn can be defined as the eagerness or willingness to attend and learn the material in a developmental program. While a student's ability and intellect can influence what they can do, it's their level of motivation that plays a significant role in their focus and the amount of effort they put into a given learning activity. The success of a flipped classroom heavily relies on students being motivated to undertake substantial out-of-class work independently.

Students have a hard time ensuring that they come prepared to class having reviewed the assigned materials. On the other hand, teachers have concerns about the integrity of their students. With the advent of modern technology, it has become increasingly easier for students to search for answers during exams or quizzes using the internet. This has raised questions about the credibility of students and their ability to perform well without relying on external sources.



Students' accountability and integrity are essential values that contribute to a positive learning environment and academic success. By demonstrating accountability, students take responsibility for their learning and actions, while integrity ensures that they uphold ethical standards and maintain the integrity of the academic process.

Sub-theme 3.3 Higher Workload

A "higher workload" refers to an increase in the number of academic tasks, assignments, or responsibilities that students or educators must manage within a given timeframe. This often includes pre-class materials that should be engaging to ensure that students are well-prepared for upcoming classes. Students and educators must learn to manage their time effectively to ensure that they can meet the demands of a higher workload while maintaining a healthy work-life balance.

(P10, 1-2): "I find it stressful to have to make sure I understand the material before class discussions."

(P05, 1-3): "My dislikes are I put more work in watching long video lectures or presentations. It is also hard for me to absorb all the information just by watching presentations, so I need to rewatch it multiple times which is also very tiring."

(P06, 1-5): "I spent double my time in preparing interactive activities and videos to ensure that my students will have the eagerness to study and not be bored." P3: "What I disliked about it is just the idea that I need to give more time in doing my pre-class videos and presentation to make sure that it is engaging, and it must show my students how the exercises are done properly."

In addition to the advantages that the flipped classroom model offers in the education process, it also presents several challenges within its structure. Of these challenges, the most prominent one is preparing lesson videos, as well as visual and written materials, which is a difficult and time-consuming task. (Davies et al., 2013; Gannod et al., 2008; Hamdan et al., 2013; Herreid & Schiller, 2013). According to Bergmann and Sams (2012), readily available instructional resources can be employed with ease, thereby minimizing time consumption. By utilizing existing resources, such as pre-existing materials or technology, organizations can optimize their use of time and resources without sacrificing the quality of instructional content. As such, it is advisable to explore the potential of readily available instructional resources to streamline instructional processes and achieve optimal outcomes. However, even if each teacher wants to do their lesson and other course content, this will be a challenge for the just in first year since the videos and presentations prepared before can be used easily in the next years along with necessary refinements and revisions based on current updates in the field. Thus, through teachers' collaboration with each other, they can carry out shared work or utilize pre-made resources from internet, and teachers can overcome this challenge.

As observed, student dislikes having too much to study and so many activities to be done. These experiences heighten when they are assigned more homework, projects, essays, or study materials across multiple subjects or courses and to be accomplished at the same time. Preparing engaging and effective pre-class materials can be very time-consuming for instructors.

It's essential for educators to be mindful of students' workload and to provide support, guidance, and resources to help them manage their academic responsibilities effectively. Similarly, educational institutions should consider strategies to support teachers and staff in managing their workload to maintain a positive work environment and promote student success.

Theme 4: Confrontation Experiences with Flipped Classroom

The sudden implementation of the flipped classroom approach, while promising in its potential benefits, has not been without its fair share of challenges. Instructors and students alike have grappled with various issues as they navigate this alternative approach to teaching and learning. In the first stage, students may face the course subject outside of class which could lead to opposition towards this new method. They may come to the class not preparing themselves for active learning. This issue can be



resolved employing acquiring knowledge through various sources such as educational videos or supplementary reading material. Additionally, one may opt to undertake examinations either online or within a classroom setting. Educators can create video and reading materials that are aligned with their class activities. While many educators use videos for out-of-class learning, a study found that students struggle to find quality videos. This is because educators create only a small amount of high-quality videos because it takes time to produce (Herreid and Schiller, 2013; 62).

Sub-theme 4.1 Access to Technology and Technological Issues

Access to technology in the flipped classroom approach for teaching Physical Education refers to students' ability to use digital devices and internet resources to access pre-recorded lectures, instructional videos, or online materials outside of traditional class time. This access is crucial for successfully engaging in the self-directed learning components of the flipped model.

Some students don't have reliable access to technology, which can hinder their ability to engage with pre-class materials.

(P07,1-4): "The biggest challenge for me is that I don't have access to an unlimited internet connection, it's so frustrating given the idea that you have all the resources (lessons and videos) to rewatch as much as you can but don't have the unlimited internet to do it."

(P09,1): "The challenges I faced that time were the limited internet connection. Lisud man gud mi kayo maam, so maglisud sad kog pangita internet"

(P01, 1-3): "For a student with financial instability, it's hard for me sometimes to watch the video presentation and access activities on time due to not having an internet connection which leads to late submission of activities."

(P07, 1-3): "when there are some video lectures from the teachers that are blurry or recorded unclearly it was hard for us to clarify it directly since we must wait for the scheduled discussion to come."

Blended learning approaches "strategically, systematically and effectively integrate a range of technology-enhanced learning across physical and virtual environments" (James Cook University, 2014, section 3). The issue however is that the student experience of online learning has continued to be one of high dissatisfaction with many facets of their learning journey (Bolliger & Martindale, 2004). When applying the flipped classroom model, lack of access to internet technologies presents a challenge from both technical and economic perspectives for students. Yet, the applications that are used in flipped classroom model practices are compatible with many devices such as computers, tablet PCs, smartphones, etc. narrowing the problem as almost everyone has a smartphone including children nowadays. It is important to ensure that the group of students working together has the necessary technical infrastructure to support flipped classroom model applications.

Some students don't have reliable access to technology, which can hinder their ability to engage with pre-class materials. Technical glitches or platform compatibility problems are also some of the challenges that the students experience. The flipped classroom relies heavily on technology for delivering pre-class materials and engaging students outside of the classroom. For individuals who are not comfortable with technology or who have concerns about its role in education, the flipped classroom may be viewed negatively.

It is important to consider the accessibility of online resources for students, including internet connectivity and device availability. Provide alternative options for accessing content, such as offline materials or designated study spaces with internet access.

Sub-theme 4.2 Lack of immediate feedback

The lack of immediate feedback in the flipped classroom approach for teaching Physical Education refers to a potential challenge where students may not receive instant responses or guidance during the initial



self-directed learning phase. Unlike a traditional classroom where questions can be addressed immediately, students engaging with pre-recorded videos or materials outside of class might face delays in obtaining clarifications or feedback. To mitigate this challenge, instructors often implement strategies such as discussion forums, online platforms, or scheduled virtual office hours to provide a means for students to seek clarification or ask questions. It emphasizes the importance of creating effective communication channels to address queries and ensure students can progress with a solid understanding of the content.

(P10, 1-4): "Learning physical Education presents challenges, through the flipped classroom includes finding it hard to remain motivated when studying on your own and occasionally becoming confused about a particular issue without the teacher's prompt explanation."

(P08, 1-4): "The challenging issue I experienced while learning P.E with the use of Flipped Classroom Approach was the lack of immediate feedback. If I was doing an exercise incorrectly, I wouldn't know until I was in class, which could potentially lead to injuries."

(P01,1-4): "The lack of real-time interaction and hands on experience with direct guidance were also a challenge for me."

P02: "It's hard to execute well the given task without someone to guide personally. I'm also unsure of my own learning or how the way I execute the given task."

It is suggested also that putting videos online may not offer enough scaffolding for some students, cause they're not able to ask questions to clarify their ideas in real time, and similar to teachers who cannot ask questions to check for understanding as learning is taking place (Howitt & Pegrum,2015).

Most of the students find it very challenging not to have immediate feedback since they're used to having it in the traditional model where they can ask directly to teachers on the things they're confused with now, and they have a strong preference for traditional teaching methods that they are familiar with and feel comfortable using.

By implementing formative assessments, we can gain a deeper understanding of our students' learning progress before we meet with them in person. Timely feedback on pre-class assignments, along with formative and summative assessments, can help us provide a richer learning experience for our students.

Sub-theme 4.3 Equity Concerns and students' doubtfulness

Equity concerns in education pertain to ensuring fairness, inclusivity, and equal opportunities for all students, regardless of their background, abilities, or circumstances. These concerns address disparities in access to educational resources, opportunities, and outcomes, with a focus on promoting equity and reducing systemic barriers that may impede student success. Students' doubtfulness refers to feelings of uncertainty, skepticism, or lack of confidence in their abilities or understanding. In the context of education, students may experience doubtfulness when they encounter challenging concepts, struggle to grasp new information or feel uncertain about their academic performance.

(P03, 1-4): "One issue I experienced in teaching P.E. using Flipped Classroom is that when I gave a list of exercises and the students needed to find the right process in doing the exercise properly, but the students had different ways in doing the exercise which gave them confusion."

(P06, 1-5): "Another one is the variations of techniques or ways they saw on another reference how to do the task given lead to confusions. One issue I saw as a teacher in utilizing flipped Classroom is that students showed doubtfulness in the way they are executing exercises given or in performing correct skills in certain sports."

(P02, 1-2): "Dah, maglibog ko maam kung sakto ba ako gibuhat or gipangbuhat, ambot lang gyod"



("I'm also unsure of my learning or how the way I execute the given task.").

(P09, 1-2): "The less student-teacher interactions which give me doubts about how the way I'm learning."

Bland (2006) suggests that students may face challenges in adapting to the new responsibilities and expectations presented by the flipped classroom approach. To facilitate the transition to a flipped classroom model, it is recommended to gradually implement this approach while communicating responsibilities and expectations clearly. Furthermore, the use of a rewards system can serve as an effective incentive to encourage adoption and engagement. By following these steps, educators can effectively promote an interactive and engaging learning environment that maximizes student outcomes.

There were some variations in students' pre-existing knowledge and skills, leading to disparities in their readiness for in-class activities. Given that there is no one to guide the students through the given videos and lecture presentations which allow the students to explore and find other references that could help them understand the given topics somehow this idea gave the students doubtfulness.

The essence of addressing equity concerns in the flipped classroom model is rooted in the commitment to promoting educational equity, social justice, and academic success for all students. It involves fostering a supportive and inclusive learning environment where every student feels valued, respected, and empowered to reach their full potential. By prioritizing equity concerns and implementing proactive measures to address disparities and barriers, educators can create a more equitable and inclusive flipped classroom model in teaching P.E., thereby enhancing student engagement, participation, and success.

Theme 5: Master Plan in Work

While the flipped classroom approach has its challenges, these are the strategies students and instructors used to overcome the challenges they have faced in the use of flipped classrooms in teaching Physical Education. In addition to the advantages, the flipped classroom has some disadvantages such as the inability to keep track of whether students have previously learned the proposed materials, a sharp technological need, the difficulty in independently mastering the material for those who are not used to learning, and the inability to ask questions while studying the material (Yildirim & Kiray, 2016).

Sub-theme 5.1 Interactive platform

Interactive platform refers to a digital or online space where students actively engage with instructional materials before class. This platform may include videos, presentations, or other content that students review independently, allowing class time to be more interactive and focused on application, discussion, and practical activities. It encourages student participation, collaboration, and a deeper understanding of physical education concepts during in-person sessions.

(P08, 1-3): "To overcome these challenges, I suggest having a more interactive platform where students can ask questions or clarify doubts immediately while the videos."

(P01, 1-2): "Provide timely feedback on activities and quizzes, use gamification such as badges points, and create a schedule with alternate formats."

(P10, 1-2): "Making a regular study schedule and asking questions in online forums or during virtual office hours will help you get beyond these challenges."

(P09,1-4): "What I suggest overcoming the challenges I faced is to have a specific time or a scheduled time which students can video call teachers to ask questions or clarify some things with the use of GCs, with this student-teacher interaction will be higher."

Active learning techniques may incorporate blended learning and the flipped classroom; the use of media to interconnect students with other students with Skype and Facebook Messenger, and resources that



include video games (Bradley, 2002). These are E-activities that are defined as "frameworks for enabling active and participative online learning by individuals and groups" (Salmon, 2013, p. 5), and are utilized in online learning to create a clear structured opportunity for learners to participate and interact collaboratively with the content, peers, and the e-moderator.

The participants' experience showed that the more interactive the platform is, the more potential it must enhance student engagement, learning outcomes, collaboration, and inclusivity. However, educators must carefully consider the challenges and equity considerations associated with implementing interactive platforms to ensure that all students can benefit from this approach.

Incorporating a more interactive platform in the use of the flipped classroom model in teaching P.E. enhances the learning experience by promoting active engagement, and accessibility which can draw students in liking the flipped classroom approach. It empowers students to take ownership of their learning journey, develop essential skills, and achieve success in P.E. and beyond.

Sub-theme 5.2 Collaboration and Initiate Interaction

In the flipped classroom approach for teaching Physical Education, collaboration refers to students working together on learning activities, discussions, or projects. It emphasizes peer interaction and cooperative learning, leveraging collective efforts for a deeper understanding of the subject matter. Initiating interaction involves prompting students to actively engage with the learning materials outside of class. This could include watching instructional videos, reading relevant content, or completing assignments independently before the in-person class. The goal is to prepare students for interactive and collaborative activities during class time, fostering a more dynamic and participatory learning environment.

(P07, 1-4): "What I did to address this issue is to watch the lessons with my classmates. This strategy not only solves my problem it also helps me in my learning since by watching with my classmates allows us to collaborate. Nya mas maka learn na mi maam kay malingaw ra man mi, di kayo mistress ba".

(P04, 1-4): "The effective methods that I suggest in overcoming the challenging issues with the used of Flipped Classroom approach in learning P.E are fostering collaborations, monitoring progress, and encouraging self-reflection of the students."

(P09, 1-4): "What I suggest overcoming the challenges I faced is to have a specific time or a scheduled time which students can video call teachers to ask questions or clarify some things with the use of GCs, with this student-teacher interaction will be higher."

The teacher can foster a student-centered classroom environment by offering opportunities for peer collaboration and teacher-to-student mentoring (Prensky, 2010). If you want to create a classroom environment that puts students at the center of their own learning, consider giving them opportunities to work collaboratively with their peers and receive guidance from you, the teacher. According to Prensky (2010), this approach can help students feel more engaged and motivated, which can lead to better learning outcomes (Fulton, 2012; Roehl et al., 2013)

The experiences of the participants show implications that peer interaction and cooperative learning are key components of this approach, which aims to leverage collective efforts for a deeper understanding of the subject matter.

In essence, collaboration and peer interaction don't just result to deeper understanding and boost learners academically but also it is socially rewarding which prepares students for success in school and beyond.

Sub-theme 5.3 Preparations and time management



Preparations refer to the activity's students undertake before the in-person class session. This can involve reviewing instructional materials, such as videos or readings, to gain a foundational understanding of the upcoming lesson. Preparations are essential for students to come to class ready to engage in discussions, activities, or practical exercises related to the pre-studied content. Time management in the flipped classroom context involves students effectively allocating their time to complete pre-class assignments and engage in self-directed learning. It also emphasizes the instructor's role in planning the in-person class time efficiently, ensuring that it is used for interactive and application-based activities rather than traditional lecturing. Effective time management supports a balanced and productive learning experience within the flipped classroom model.

(P06, 1-3): "To address this issue it's very important for us teachers to encourage the students to ask and make sure that we teachers should clarify and show the proper way to avoid confusion."

(P05, 1-4): "The effective method I suggest overcoming these challenges, students should be aware of the situation they are in like practice time management. In watching video presentations or lectures try to imitate or conduct what you see in that very moment."

(P03, 1-5): "What I did to resolve the issue, was I gave the students one video that served as a reference to lessen the confusion and to have a uniform process in doing so. Also, during discussion it's very important for the teachers to firmly show what processes are to be followed."

P2: "Proper preparations of the teacher, student's self-management and time management."

The pressure of completing curriculum materials within a given timeframe can lead teachers to avoid and hate constructivist approaches and inquiry-based learning methods. The flipped classroom model provides an alternative solution by helping teachers overcome this time-pressure problem. By acquiring theoretical knowledge not just inside the classroom, teachers gain more time to assist and support their students' needs. By creating an enriched learning environment, we were able to cultivate a critical point of view that allowed for more constructive and productive dialogue. In a flipped classroom model, teachers could closely monitor their students' progress student' side and outside of school. By implementing scaffolding strategies, teachers can positively influence students' individual performance and group work, ultimately enhancing their understanding of the material. Additionally, these strategies are highly effective in teaching higher-level cognitive skills (Pritchard, 2015; Rosenshine & Meister, 1992). According to Jacobs (2001), the implementation of instructional scaffolds has led to an increase in productivity and effectiveness in the teaching process. The flipped classroom model offers the benefit of allowing students to receive support not only from their teachers but also from their peers, both inside and outside of the classroom. This collaborative approach to learning has proven to be highly beneficial for students and helps to promote a more engaging and effective learning environment.

It is crucial to properly prepare and manage time to successfully implement the flipped classroom model in teaching Physical Education. Doing so can help maximize learning opportunities, optimize class time, enhance student engagement, increase flexibility, improve accountability, facilitate effective assessment, reduce cognitive load, and enhance teacher efficiency. By prioritizing these aspects, educators can create a dynamic and enriching learning environment that promotes student success in Physical Education and beyond.

In essence, Effective preparation and time management are critical components of the flipped classroom model for teaching Physical Education. This approach empowers students to actively engage with the course content, collaborate with their peers, and take ownership of their learning. By prioritizing these aspects, educators can provide individualized learning experiences, promote accountability and responsibility, and encourage continuous growth and development. These principles also foster a dynamic and enriching learning environment that prepares students for success in Physical Education and beyond. With this approach, we can ensure that our students receive the best education possible and achieve their full potential.

Conclusion



This study concludes that adopting the Flipped Classroom approach for instructing Physical Education concepts yields remarkable efficacy. The data underscored the enthusiasm and profound impact of the Flipped Classroom approach, indicating its potential as a viable alternative to conventional teaching methodologies. The study highlighted the need for effective pre-class content, clear communication, and thoughtful design of in-class activities. The adaptability of students and instructors was commendable, demonstrating flexibility and creativity in facing challenges. To improve the Flipped Classroom approach for teaching Physical Education at the tertiary level in the Philippines, a set of proposed enhanced guidelines has been developed. These guidelines aim to create a culturally relevant, supportive, and engaging Flipped Classroom experience, ultimately enhancing student learning and overall educational experience.

As a researcher and Physical Education (P.E.) teacher, this is my reflection as I explored the flipped classroom approach in teaching Physical Education (P.E.). I discovered its potential to transform the traditional P.E. learning landscape by enhancing student engagement and learning outcomes. However, implementing this pedagogy in P.E. education requires a recalibration of my role as a teacher. The traditional role of a P.E. teacher involves leading physical activities, whereas the flipped classroom approach shifts the focus to designing engaging pre-class materials, facilitating interactive in-class sessions, and providing feedback to students. This shift requires P.E. teachers like me to become more creative in crafting resources that convey information effectively and inspire independent exploration. One of the challenges I faced revolved around the necessity for additional support structures tailored to the diverse needs of students. Recognizing that students came with varying degrees of familiarity with this pedagogical model, it became evident that guidance in navigating the digital terrain effectively was essential for their success. For some students, accustomed to traditional classroom settings, the shift to a flipped model required a significant adjustment. They sought reassurance and guidance on how to effectively engage with the pre-class materials, often grappling with the newfound independence and responsibility that came with self-directed learning. As a teacher, it became imperative to provide clear instructions and resources to aid their transition, ensuring they felt empowered rather than overwhelmed by the change. Moreover, considering the disparities in learning styles and technological access among students, it became apparent that a one-size-fits-all approach would be inadequate. Some students thrived with visual aids and interactive resources, while others preferred textual materials or auditory explanations. Additionally, disparities in internet connectivity and access to devices posed logistical challenges, requiring innovative solutions to ensure equitable participation. To address these concerns, I implemented a multi-faceted approach aimed at accommodating the diverse needs of students. This included providing a variety of instructional materials in different formats to cater to varying learning preferences. Additionally, I offered supplementary resources and tutorials to support students in navigating the digital tools and platforms used for accessing pre-class materials. Furthermore, recognizing the importance of accessibility, I worked closely with the institution to identify and address barriers to technology access faced by students. This involved exploring options for providing subsidized internet access, loaning out devices, and offering flexible scheduling for accessing materials on-campus facilities. Despite the initial hurdles and uncertainties observing students eagerly delving into the pre-class materials with palpable enthusiasm was a heartening sight. The collaborative discussions that ensued were vibrant, with each participant bringing their unique perspectives to the table, enriching the learning experience for all involved. Witnessing their active engagement and genuine curiosity as they grappled with complex concepts was truly gratifying, underscoring the transformative power of education. Amidst the backdrop of uncertainty, witnessing the resilience and tenacity of these students was a beacon of hope. Their willingness to push boundaries, explore beyond their comfort zones, and embrace the learning process wholeheartedly underscored their readiness to navigate the complexities of the world beyond the classroom. As an educator, it was immensely rewarding to play a part in their journey, knowing that each step taken was a stride toward their personal and academic growth. This experience has highlighted the importance of an ongoing dialogue between research insights and classroom realities, underscoring the dynamic nature of education. Teachers and students must adapt to meet the diverse needs of those involved continually.

References

Adams, N. E. (2015). *Bloom's Taxonomy of Cognitive Learning Objectives*. Journal of the Medical Library Association: JMLA, 103(3), 152.



- Al-Ababneh, M., (2020). *Linking Ontology, Epistemology and Research Methodology*. Science & Philosophy Volume 8(1), 2020, pp. 75-91 75 Article. DOI: 10.23756/sp.v8i1.500
- Barua, A., Gubbiyappa, K. S., Baloch, H. Z., & Das, B. (2014). Validation of feedback questionnaire on Flipped Classroom (FC) activity. *Journal of Advanced Pharmacy Education & Research*, 4(3), 339-349.
- Baepler, P., Walker, J. D., & Driessen, M. (2014). The flipped classroom: A course redesign to foster learning and engagement in a health professions school. *Academic Medicine*, 89(2), 236-243.
- Bergmann, J., & Sams, A. (2012). *Flip Your Classroom: Reach Every Student in Every Class Every Day*. Washington DC: International Society for Technology in Education, 120- 190
- Bishop, J.L., & Verleger, M.A. (2013). *The flipped classroom: A survey of the research*. In ASEE National Conference Proceedings (Vol. 30, No. 9, pp.1-18).
- Borchert, D. M. (2006). *The Encyclopedia of Philosophy* 2nd edition. vol. 3.
- Botagariyeva, Tulegen A., Kubiyeva, Svetlana S., Baizakova, Venera E., Mambetov, Nurolla, Tulegenov, Yerkin K., et al. (2016). Studying the effectiveness of physical education in the secondary school (by the example of Kazakhstan). *International Journal of Environmental and Science Education*, 11(10), 3575-3594.
- Bruce, A. (1985). *Metaphysics*. Univ of Minnesota Press. p. 11.
- Campus History - Cebu Technological University - San Remigio*. (2013). Ctu.edu.ph. <https://www.ctu.edu.ph/sanremigio/about/campus-history>
- Divjak, B., Rienties, B., Iniesto, F. et al. Flipped classrooms in higher education during the COVID-19 pandemic: findings and future research recommendations. *Int J Educ Technol High Educ* 19, 9 (2022). <https://doi.org/10.1186/s41239-021-00316-4>
- Giorgi A. The theory, practice, and evaluation of the phenomenological method as a qualitative research procedure. *J Phenome Psych* 1997; 28:235-60
- Hofweber, T. (2020). Logis and Ontology. *The Stanford Encyclopedia of Philosophy*. *Metaphysics Research Lab, Stanford University*.
- Honderich, T. (2005). *Ontology*. The Oxford Companion to Philosophy. *Oxford University Press*.
- Kaput, Krista (2018). Research on Student-Centered Learning as a Whole. Evidence for Student-Centered Learning, 11-12.
- Lo, C. K., Hew, K. F., & Chen, G. (2017). *Toward a set of design principles for mathematics flipped classrooms: A synthesis of research in mathematics education*. *Educational Research Review*, 22, 50-73.
- Locke, L. F. (1992). Changing Secondary School Physical Education. *Quest*, 44, 361-372. <https://doi.org/10.1080/00336297.1992.10484062>
- Love, B., Hodge, A., Grandgenett, N., & Swift, A. W. (2014). Student learning and perceptions in a flipped linear algebra course. *International Journal of Mathematical Education in Science and Technology*, 45(3), 317-324.
- Martinich, A.P. (n.d.). *Epistemology*. <https://www.britannica.com/topic/epistemology>.
- Morrow, R., Rodriguez, A. and King, N. (2015). Colaizzi's descriptive phenomenological method. *The Psychologist*, 28(8), 643-644.
- O'Flaherty, J., & Phillips, C. (2015). *The use of flipped classrooms in higher education: A scoping review*. *The Internet and Higher Education*, 25, 85-95
- Orlic, A., Gromovic, A., Lazarevic, D., Colic, M., Milanovic, I., & Radisavljevic-Janic, S. (2017). Development and validation of the physical education attitude scale for adolescents. *Psihologija*, 50(4), 445-463. DOI: 10.2298/psi161203008o
- Pierce, R., & Fox, J. (2012). Vodcasts and active-learning exercises in a "flipped classroom" model of a renal pharmacotherapy module. *American journal of pharmaceutical education*, 76(10).
- Sandkühler, H. J. (2010). *Ontologie*. Enzyklopädie Philosophie. *Meiner*. Archived from the original on 11 March 2021.
- Siedentop, D. (1992). Thinking Differently about Secondary Physical Education. *Journal of Physical Education, Recreation & Dance*, 63(7), 69-77. DOI: 10.1080/07303084.1992.10609926
- Smart, K. L., Witt, C., & Scott, J. P. (2012). Toward Learner-Centered Teaching: An Inductive Approach. *Business Communication Quarterly*, 75(4), 392-403.
- Stern, M. J., Powell, R. B., & Ardoin, N. M. (2010). Evaluating a Constructivist and Culturally Responsive Approach to Environmental Education for Diverse Audiences. *The Journal of Environmental Education*, 42(2), 109-122.



- Strayer, J. F. (2012). How learning in an inverted classroom influences cooperation, innovation and task orientation. *Learning Environments Research*, 15(2), 171-193.
- Tinning, R., & Fitzclarence, L. (1992). Postmodern Youth Culture and the Crisis in Australian Secondary School Physical Education. *Quest*, 44, 287-303.
- Williams, J. (2002). Interest in internet-based technologies within the field of education has increased. *Journal of Educational Technology*, 45(2), 217-230.
- Zappe, S., Leicht, R., Messner, J., Litzinger, T., & Lee, H. W. (2009). Flipping the classroom to explore active learning in a large undergraduate course. In 2009 IEEE Frontiers in Education Conference (pp. 1-6). IEEE.