

Title

**From “Sports Permission” to “Body Autonomy”: Feminism
Reshaping the Body Narrative in the Physical Education Course
at the University of Michigan in the 1970s-2000s**

Name of Student

Hongyue Huang (SN:2405712)

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Having written this far, my master's degree programme is coming to an end. Looking back to September last year when I first arrived at UWTSD, I was filled with a mix of nervousness, excitement and anticipation, amazed at how much progress I could make in just one year. My three academic advisors have been invaluable in my heart. Sue, with her warm and approachable demeanour, always engaged us in friendly conversations during class and patiently listened our questions. Huw, with his steady and wise nature, instilled in me a rigorous attitude toward knowledge, which has greatly influenced my academic exploration. Yiyi, with her kindness and intelligence, showed particular care for Chinese students like me, especially through the weekly upgraded sessions, which continuously cultivated my critical thinking skills. The care and support from these three teachers will always be cherished myself. There was also a group of lovely classmates, despite our different cultural backgrounds, we always enjoyed lively conversations, especially with Tyler, Paul and Angella. I also want to thank myself for becoming more confident and optimistic. My time at UWTSD has been a precious treasure in my life, and I hope everything goes smoothly for me in my future studies and work in China! I also wish my lovely three teachers and classmates happy and smile forever!

ABSTRACT

Background— Since the 1970s, Feminism has driven reforms in physical education courses in higher education in the United States even around the world. The University of Michigan (Hereinafter referred to as UMich). As the first public university in the United States to implement physical education course reforms, it has promoted a breakthrough transformation in female school physical education from “Sports Permission” to “Body Autonomy”.

Methods and Methodology— This qualitative research is based on Feminism Theory and Feminism pedagogy will mainly adopt literature review as research methodology and methods. The specific period of this research is between the 1970s and 2000s, the policy documents, laws and regulations and university physical education curriculum outlines selected are mainly from the mid-to-late 20th century. However, to ensure that the research is closely integrated with today's higher education physical education curriculum, a preference is given to selecting books and essays published in recent years, with a focus on literature from the United States and Michigan.

Research questions— It mainly focuses on three core research questions: (1) How do these reforms reflect the redefinition of body autonomy by feminism? Sub-question (1) What key reforms did the physical education course of the University of Michigan undergo in the 1970s-2000s? (2) How does the establishment of women-only physical education courses reflect women's demands for a "Safe teaching space"? Sub—question (2) how to construct a new body narrative that is different from male-dominated physical education courses? (3) How does the building and development of professional women's sports teams at the University of Michigan break stereotypes and demonstrate women's athletic ability?

Research aims— This research aims to reveal how Feminism broke through the traditional male body narrative through the physical education curriculum reform practice at the University of Michigan in the 1970s-2000s and reshaped women's body autonomy, cognition and expression under gender equality.

Main findings— Research has found that UMich has promoted the awakening of women's awareness of body autonomy and individual development through the establishment of women-only sports courses and the formation of women's professional sports teams, thereby developing a distinctive sports talent cultivation programme. The gender equality in UMich's sports education reflects the broader social shift towards gender equality in the United States. The innovative aspect of this research lies in its recommendation to incorporate psychological counselling into daily training and to consider religious factors when attempting to list certain water sports as electives. The future development of AI technology will be a key focus area for this research area in women's physical education.

Limitations— Firstly, this research subjects were mainly female college students with no physical disabilities. Women with movement disorders and special needs were not included. Secondly, there is little existing literature on university female sports teams, so research in this area is not yet very in-depth and needs to be further developed in the future.

ACRONYM

UMich	University of Michigan
AAU	Amateur Athletic Union
NCAA	National Collegiate Athletic Association
WNBA	Women's National Basketball Association
BMI	Body Mass Index
ACL	Anterior Cruciate Ligament
AI	Artificial Intelligence
VR	Virtual Reality
ADHD	Attention Deficit Hyperactivity Disorder
RED-S	Relative Energy Deficiency in Sport

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Figure 1. Diagram of Sit-and-Reach Test

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CHAPTER 1. Introduction

From the 1970s to the 2000s, the United States experienced its second and third feminism movements, which advocated slogans including "Gender Equality", "Body Autonomy", "Reproductive Freedom". These slogans formally brought women's private spheres (e.g. bodies, health, sexuality and childbirth etc.) into public education discussions for the first time (Castro, 1990; Kirkpatrick, 2010), breaking with the previous educational tradition dominated by the male body. However, physical education, as the most directly impactful field in higher education, often overlooks gender norms (Steuter, 1992; Bassnett, 2012; Ghandy, 2016). As one of the first public universities in the United States to set up women's physical education programs, the development of physical education curriculum and evolution of the University of Michigan (All are abbreviated as UMich below) are both exemplary and representative.

But previous research has primarily focused on sports policy formulation and curriculum development, tending towards changes in school sports regulations, sports programs and course content (Steuter, 1992; Chow, 1987). There has been little research on gender culture and female body autonomy in physical education courses. However, as the only course in higher education that directly involves physical activity, physical education provides a crucial platform for observing the evolution of gender norms and body narratives. Although the federal government has successively introduced relevant education laws e.g. the **Title IX Act 1972** (US) to nominally guarantee female students' body freedom and course participation, there are still some gender discrimination phenomena in course content, teaching formats and student-faculty interactions (Sandler, 2007). These phenomena will

probably undermine UMich's distinctive training model of student athletes and negatively impact the development of equity in physical education curriculum in American higher education.

This research will mainly take the physical education curriculum and female student athlete training at UMich as its research object, attempting to analyse the transformation in the physical narrative of female students from "Sports Permission" to "Body Autonomy" under the influence of two feminism movements between the 1970s and 2000s. This research will examine three key aspects: the reform of physical education course evaluation criteria, the establishment of women-only physical education courses and the development of women's professional sports teams. And it will critically explore and reflect on these issues in conjunction with relevant theories of Body Politics, Feminist Pedagogy and Social Sports etc., ultimately drawing conclusions. Furthermore, this research will learn the experiences of other American universities and some East Asian countries like China and South Korea in developing physical education. The high emphasis on education in East Asian countries aligns with the philosophy of American physical education. A sense of collective honour and discipline are exactly what team sports require. However, European and South American countries have their own well-established and highly commercialized clubs (especially in the field of football), so they have relatively little interest in the training model of American college sports education. And it provides recommendations for the future direction of physical education at UMich.

Thus far, this research aims to respect female students' body autonomy, reduce physical shame or anxiety and enhance their athletic confidence. Driven by feminism, UMich

has redefined its physical education curriculum and teaching methods, standardized classroom evaluation criteria for physical education and other courses and fostered a gender-equal teaching environment. UMich encouraged women to become physical education instructors and improve teacher-student interaction, fostering an open and fair classroom atmosphere and promoting the development of women's lifelong athletic abilities (Ward, 2014). UMich also offered dedicated physical education courses for female students as well as courses in traditionally male-dominated strength sports like boxing and wrestling (Verbrugge, 2012), encouraging female students to explore diverse sports and breaking down gender stereotypes. Higher education institutions and physical education faculty have also benefited a lot from this initiative. Feminism has provided reform guidelines for UMich and other American universities in developing **the U.S. Gender-Inclusive Physical Education Curriculum Design Framework 2000** (US). This initiative has also helped physical education instructors upgrade their teaching tools (e.g. gender-neutral grouping, inclusive instruction etc.) and realised their professional values (e.g. from skills coaches to body empowerment advocates), enhancing their sense of professional identity in education.

Current research on physical education in higher education institutions primarily focuses on curriculum content and impact, with limited research on the gender history of physical education and female body autonomy. At the same time, some research literature defined "Body Autonomy" simply as a matter of combating gender harassment (Mackenzie et al., 2001; Diprose, 2005; Sugar, 2014), without systematically linking it to physical education teaching interactions and evaluation criteria. Therefore, this research will redefine the meaning of "Body Autonomy" in physical education by focusing on these 3 following aspects:

sports field, sports experience and body boundaries, making up for the existing gaps in public research on female students' body autonomy. Moreover, traditional case studies have primarily focused on elite white women (Alvarez, 1999; Roth, 2004), rarely involving immigrant and minority women and overlooking the impact of class and race on physical education. Therefore, this research will include immigrant and ethnic minority women to make the findings more universal. Existing physical education research at UMich inclined more on teaching developments after the 21st century (Macpherson, 2021). So this research will focus on the period of the 1970s-2000s to make up for the gap in gender research in Michigan's physical education curriculum and provide a reference for the institutional development of female body autonomy.

This research is qualitative and based on feminism theory and feminism pedagogy. It will adopt literature review and documentary analysis as research methodology and methods. However, it also has some limitations. There is insufficient historical documentation to support research on physical education courses in Michigan during the early stages of the second Feminist movement. The existing historical records at UMich primarily consisted of physical education courses records after the 1975s. Documents from the five years between 1970 and 1975 were destroyed by the Michigan immigrant riots, leaving fewer remaining sources. Therefore, limited literature is available for this research on physical education during this period. Additionally, the scope of research conclusions is limited. The female body autonomy reforms driven by feminism from the 1970s to 2000s were limited to able-bodied female students with no physical or intellectual disabilities, excluding those with special needs or requirements. These limitations will restrict the comprehensiveness of

conclusions of this research.

Conducting this research is a dual adventure of academic exploration and personal experience for myself. I personally experienced body shame in college physical education classes, particularly when enduring abdominal pain during menstruation and engaging in swim training. It was only when I read *The Unbearable Weight* (Bordo, 1984) that I realised how women's bodies have long been stigmatized by gender within institutionalized physical education. So I decided to choose the University of Michigan, a representative American sports powerhouse, to study how the narrative of female bodies in its physical education courses has evolved under the influence of Feminism. I hope this research will serve as a window into the challenges and confusion faced by female students in physical education, and I urge more universities to provide an open and equal learning environment for female students. However, due to limitations in knowledge, resources and time, this research has certain limitations and may not be applicable to university physical education in all countries and social systems. It only represents the specific situation in the eastern United States.

In summary, this research aims to reveal how Feminism broke through the traditional male body narrative through the physical education curriculum reform practice at UMich in the 1970s-2000s and reshaped women's body autonomy, cognition and expression under gender equality. At the same time, this research is divided into four research objectives: the first one is to understand Feminism's redefinition of body autonomy by analysing policy texts, archives and relevant essays of physical education teachers in the 1970s-2000s. The second one is to make sense of women's "Safe Teaching Space" through literature review publications on Feminism Education. To further demonstrate the comprehensiveness of the

second one, the third objective is to compare the differences in teaching content between women's courses and co-educational courses by analysing physical education course outlines, published textbooks and essays related to physical education teaching. The fourth one is to understand how professional women's sports team breaks stereotypes by analysing relevant essays of female physical educators in American universities, particularly through the demonstration of women's athletic ability by analysing the **Title IX Act 1972** (US) stereotypes and essays(dissertations) published by students and teachers.

CHAPTER 2. LITERATURE REVIEW METHODOLOGY

Feminism has promoted the reform of physical education courses in higher education in the United States and even around the world in the 1970s-2000s. As the first public university in the United States to carry out physical education course reform, the University of Michigan has better endowed female students with the right to physical liberation and healthy living under the influence of two feminism movements.

This qualitative research is based on Feminism Theory, Feminism Pedagogy and School Physical Education will mainly adopt literature review as research methodology and method. And to complete this research, I used Google Scholar, UWTSD Library online literature resources, Taylor & Francis Online, the University of Michigan Library, Yandex and other search engines to selectively analyse the literature based on different research questions.

Firstly, to search for relevant literature on female physical education input the keyword "Female Physical Education" to find literature on higher physical education. Then

sorted by country and year to focus on literature related to university physical education in the United States from the 1970s to the 2000s.

Secondly, using the keyword “UMich Female Sports ”, further search for literature related to physical education at UMich, including sports programs, course outlines, course evaluation criteria and female school teams training etc. From these documents, to analyse the differences in participation between male and female students in different sports programs, different course evaluation criteria and the gender composition of school teams and physical education teachers, which constitute the basic conditions for the research.

Thirdly, using the keyword “Feminism” to search for literature related to feminist thoughts, focusing on books and essays about women's physical liberation, body autonomy and women's discourse power to conduct research combined with feminist pedagogy.

Since Objective 4 involves research related to the development of women's professional sports teams at the University of Michigan, the keyword “school team” was used for literature retrieval, with a focus on the United States for in-depth research. By reviewing relevant literature and comparing the different training models of men's and women's school teams, areas requiring special attention for women's school teams were identified. Combined with professional literature in feminist education and women’s competitive training, research gaps and recommendations were proposed. To ensure a comprehensive research perspective, this research not only referenced relevant literature from American scholars but also literature from scholars from Europe, Asia, Latin America and other regions. It compares the measures taken by governments and universities in different countries to solve issues in women's physical education, providing effective recommendations for the current issues in women's

physical education at UMich.

Because the specific period of this research is between the 1970s and 2000s, the policy documents, laws and regulations and university physical education curriculum outlines selected are mainly from the mid-to-late 20th century. A total of 182 literature were initially searched, but some of them used the same research methods or reached similar conclusions.

The inclusion criteria for references mainly include the following points: firstly, the references must conform to the time scope specified by the research theme, that is to say, literature from 1970 to the present (2025). This time scope covers the climax and mature stages of two feminist movements, and is of great significance for researching the development and transformation of female physical education in American universities; secondly, Priority is given to literature directly related to the University of Michigan, while also including literature on physical education reforms in other American public universities; thirdly, the theme of the literature mainly involve female physical education, physical transformation and other related content, so as to ensure a high degree of alignment with the theme of this research.

In correspondence to this, literature that meets the following criteria will be excluded: firstly, Literature with an inconsistent time scope (published before 1970), except for those in the part of Introduction ; secondly, literature that didn't involve the University of Michigan or focus on physical education in primary and secondary schools; thirdly, non-academic sports event posters, unpublished personal theses, letters, confidential materials of UMich and other similar materials, as well as second-hand quoted materials with unknown sources.

On the basis of the actual circumstances of this research, 37 literature were deleted

and 145 literature were ultimately referenced. The selection of these references attempted to cover different research methods and frameworks. However, to ensure this research is closely integrated with today's American higher physical education, a preference is given to selecting books and essays published in the past 20 years, with a focus on literature from the United States and Michigan.

CHAPTER 3. Literature Review

Introduction

Based on preliminary literature reviews and the collection and analysis of various materials, this research is roughly divided into the following three research themes according to the chronological order of the physical education of UMich: the reform of Physical Education Course Evaluation Criteria, the Establishment of Women-only Physical Education Courses and the development of women's professional sports teams. Each theme is further divided into 2-3 sub-themes for research.

3.1. Lit Review Theme 1 The reform of Physical Education Course Evaluation Criteria at the University of Michigan.

3.1.1. Biological Instinctivism Evaluation Criteria

The biological instinctivism evaluation criteria were the early physical education course evaluation criteria implemented by the University of Michigan during the 1970s and 1980s. It was derived from the Theory of Evolution (Darwin, 1859), which held that the behaviours of all living organisms (including humans) were the result of natural selection.

The main components of the biological instinctivism evaluation criteria included evolutionary rationality, environmental adaptability, temporal regularity and the plasticity of human activities (Maslow, 1954). From the outset of higher physical education in the United States in the late 19th century, there was a bias toward gender segregation (Bailey and Graves, 2016; Buchmann et al., 2008). Under the direct influence of eugenics and institutional anthropology, UMich introduced “Standardised Human Body Measurements (Hitchcock, 1904)” into its physical education courses. Hitchcock (1904) stated in his research that female students with a pelvic width of less than 26 cm were required to take mandatory gymnastics training to meet course requirements. This standard used physiological measurements e.g. head circumference and pelvis etc. to predict the athletic potential of males and females in advance. But actually some female students were directly deemed unqualified for physical education courses due to factors e.g. underdeveloped breasts or anterior pelvic tilt etc., resulting in a significant imbalance where male students achieved a much higher course pass rate than female students.

Additionally, the University of Michigan, as a renowned American football powerhouse at that time, derived 25–30% of its fiscal revenue from American football events (Lee and Swaminathan, 2000). Hastings et al. (2013) analysed that UMich had repeatedly reinforced the teaching philosophy that “Male Bodies = Commercial Value (Weiler, 1993)”, prioritising the use of sports facilities such as basketball courts and swimming pools for male students, which left female students lacking access to specialised sports facilities and made it difficult for them to meet the criteria for physical education course assessments. This practice directly results in female students finding it difficult to engage in professional sports training,

making it hard for them to meet the standards in physical education course assessments and undermining their enthusiasm for physical exercise. However, Hastings et al. (2013) only recognised the impact of sports facility restrictions on female students and did not conduct in-depth research from the perspectives of female physiology or teaching philosophy. The conclusions drawn from the study can not be directly applied to classroom teaching. Shen et al. (2015) and Metzler (2017) built upon Hastings et al. (2013) pointed out that discrimination based on physiological differences and unequal resource allocation led to widespread resistance from female students toward physical education courses at UMich. Many female students at UMich refused to enrol in these courses, citing their bodies' inability to withstand intense physical activity, which temporarily halted physical education courses at UMich and hindered the smooth progress of efforts to establish students' physical health records.

Some Feminism educators have conducted specific research on this phenomenon. Winters and Esposito (2010) and Carpenter and Mojab (2017) both described in their articles that female students' resistance to physical education courses reflects the rising self-awareness of the female population. Winters and Esposito (2010) took the mandatory swimming assessments at UMich and Virginia State University as their research objects, explaining and analysing a series of efforts made by female students at these two universities to resist this unreasonable regulation. Carpenter and Mojab (2017), on the other hand, conducted a critical evaluation of the female physical education curriculum reform proposed by the Student Union of the Great Lakes Region in the United States in 1978 and pointed out its limitations.

This resistance action is actually a powerful challenge to traditional stereotypes of

women in their pursuit of gender equality and social recognition. However, this resistance action is mainly led by female college students who do not have strong social status or political influence, so it can be said to be ineffective and has not changed the current state of physical education at UMich. Moreover, Carpenter and Mojab (2017) also pointed out that such ineffective resistance can not fundamentally alter the current teaching landscape dominated by male-centric physical criteria. However, Carpenter and Mojab (2017) did not propose specific improvement measures. Neil (2017) quickly responded to the limitations identified by Carpenter and Mojab (2017). He argued that gender equality and women's body autonomy are not only important indicators of social progress but also emphasised that gender equality and women's body autonomy are necessary prerequisites for the modernisation and development of higher education. Additionally, Neil (2017) emphasised that gender equality was a significant signal of the equal distribution of educational resources. This requires educational authorities not only to establish gender equality regulations at the policy level but also to oversee their implementation by teachers in classroom instruction, ensuring that female students learn in an environment free from discrimination. Neil's (2017) conclusions not only constitute a positive response to the limitations identified by Carpenter and Mojab (2017) but also represent a profound reflection on the future of women's education in the United States. This is a commendable and worthy aspect of academic research to some extent.

This conclusion was soon supported by a large number of front-line female teachers (Shih et al., 2019; Datiri and Andrews, 2020; Wade et al., 2022). All of them confirmed Neil's (2017) conclusions in their researches, using observational methods, interviews and literature

analysis to scientifically validate their findings. Meanwhile, Shih (2019) and Datiri and Andrews (2020) both pointed out that female physical education teachers possess unique perspectives and ways of thinking in course instruction, enabling them to better understand the needs of female students. Therefore, their research demonstrates the important role female teachers play in enhancing the overall capabilities of female students. Wade et al. (2022), on the contrary, approached the issue from a negative perspective, thought that female teachers may exhibit excessive bias toward female students due to their stronger empathetic abilities. Frankly speaking, Wade et al.'s (2022) concerns are valid, so balancing the ratio of male and female teachers is a task that UMich must deal with. The second feminism movement emerged in 1978 significantly accelerated the pace of physical education curriculum reform at UMich.

3.1.2. Process- Oriented Evaluation Criteria Under Feminist Criticism

Suggs (2006) pointed out that UMich first introduced the shot put¹ as a unified testing event for both man and women students in 1978, and established different evaluation criteria based on the inherent physical strength differences between men and women. This was the first time UMich conducted a unified standardised evaluation for male and female students, primarily influenced by the second feminism movement. The slogans of the second feminism movement, which are “The personal is political (Hanisch, 1970)” and “Fighting for body autonomy (Brain, 1972)” compelled UMich to undertake institutional reforms in its physical education curriculum structure, opening up strength-based courses like boxing,

¹ a sports competition in which a heavy metal ball is thrown from the shoulder as far as possible.

rugby and fencing to female students. Armour and Yelling (2007) expanded on Suggs' (2006) analysis of the shot put event to compare and analyse more unified testing events for both genders, like gymnastics and tennis. The “Sports Event Accessibility Chart (Suggs, 2006)” he created provides a clear overview of the proportion of female students participating.

The slogan “Fighting for body autonomy (Richards, 1984)” from the second feminism movement was quickly embraced by female students at UMich. Oliver and Krik (2015) noted that between 1978 and 1980, at least 140 female students sent emails to the university president regarding sports course reforms. In response, UMich implemented reforms to evaluate sports courses using a process-oriented evaluation criteria combining regular grades and exam scores. The process-oriented evaluation criteria were proposed by the **Title IX Act 1972** (US) and aimed to focus on individual differences, as well as the physical education curriculum needs and experiences of students of different genders. Meanwhile, these criteria emphasize developing students' own abilities and willingness, and fostering proper sports habits and attitudes towards physical education.

The shift from biological instinctivism evaluation criteria to process-oriented evaluation criteria transforms the evaluation subject from standardised instruments to the students themselves, and the evaluation setting from a disciplined class to an interest-based class. The teaching objectives also shift from assessing students' physical fitness standards and proficiency in skills to stimulating students' intrinsic sports thinking, as well as fostering their lifelong sports ability. This represents a dual transformation of power transfer and body liberation. Flegal et al. (1998) analysed BMI (Body Mass Index, Keys, 1972) fitness test data from students at UMich between 1975 and 1980, noting that female students' BMI indices

rose from 17.2 in 1975 to 19.4 in 1980. BMI is often used as a reference value for the amount of muscle in the human body. An increase in its value indicates a rise in the regular physical exercise a person engages in (Keys, 1972), making it a positive indicator of healthy physical changes. So this change reflects that female students, after selecting sports activities based on their own interests, exhibited heightened training enthusiasm and significant improvements in physical fitness. However, the conclusions of Flegal et al. (1998) only reflect the basic physical fitness of students and do not provide significant assistance in reforming the evaluation criteria for physical education courses. It is limited to describing students' physical fitness and did not offer specific recommendations for reforming and optimising school physical education course evaluation criteria.

The BMI of female students serves as a prerequisite for participating in physical activities, yet it is also important to develop differentiated scoring criteria based on the students' actual physical conditions. This research found that physical education courses should not rely solely on BMI as a single indicator, but should instead introduce multiple measurement indicators e.g. physical fitness tests and skill assessments etc. to obtain a comprehensive evaluation of female students' participation in physical education courses. Especially since the beginning of the 21st century, some emerging technological methods have also been applied to physical education course teaching, using big data to scientifically analyse students' physical condition, which is also a key direction for future literature review.

To make up for the limitations of Flegal et al. (1998), Bowen and Levin (2011) conducted a detailed analysis of the reform of the grading system for physical education courses at UMich. They argued that physiological differences require differentiated grading

standards, thus affirming the different time standards for men and women in the long-distance running tests at UMich. But on the other hand, they also pointed out that students who are menstruating or have special physical needs should be granted varying degrees of exemption or postponement from the tests.

The slogan of “Women Helping Each Other (Fisher and Tronto, 1979)” in the second feminism movement also promoted the implementation of process-based evaluation criteria in physical education courses at UMich. Broglio et al. (2017), Kulick et al. (2019), Veliz et al. (2015) and other scholars have all pointed out that the slogan of “Women Helping Each Other (Fisher and Tronto, 1979)” directly hits the weaknesses of biological instinctivism evaluation criteria, transforming the previous “Human Standardised Measurement (Hitchcock, 1904)” into a visual evaluation of individual performance, while also stimulating students' enthusiasm for physical education courses. However, the research methods employed by the three scholars are not entirely identical. Among them, Broglio et al. (2017) and Kulick et al. (2019), as full-time faculty members in the Department of Physical Education and Health at UMich, directly observed and understood female students' perceptions of existing course evaluation criteria in first-year tennis and football class. They both compiled student feedback and submitted it to the university administration. In contrast, Broglio et al. (2017) used a questionnaire survey distributed randomly to students of different grades at UMich. The survey found that over half of the female students believed that formative evaluation criteria significantly enhanced their enthusiasm for physical education courses. Compared to Broglio et al. (2017)'s post-class questionnaire survey, the findings of Kulick et al. (2019) and Veliz et al. (2015) are grounded in class practice, with all data collected directly from the class,

ensuring higher reliability and practical applicability.

The in-depth reform of physical education courses at UMich quickly drew the attention of Michigan state media. The Michigan Daily (1981) reported that UMich had implemented a self-assessment evaluation criteria for some of the compulsory courses, allowing students to gain a more comprehensive self-awareness and self-assessment of the courses they had taken. This also reflects the significant influence of the slogan of “Women Helping Each Other (Fisher and Tronto, 1979)” on the evaluation criteria of all compulsory courses at UMich.

However, process-oriented evaluation criteria can also exacerbate resource allocation inequalities and significant cross-cultural differences. Pot and Hilvoorde (2013) clarified that these are the two most persistent structural defects in process-oriented evaluation criteria. They argued that class disparities persist during the implementation of these criteria, citing **UMich Student Health Records** (The University of Michigan, 1981) as an example. They noted that some Latino students received an A grade for training duration but a D grade for nutrition, resulting in their overall scores failing to meet the criteria for receiving university scholarships. However, the classification of nutritional grades in the United States is determined totally by official institutions e.g. the federal government or University Administrative Committee, rather than being a personal choice. So this phenomenon indirectly highlights the university administration's improper application of course evaluation criteria. Additionally, due to the multicultural nature of immigrants in American society, a large number of students from diverse cultural backgrounds (e.g. Muslim, African, East Asian, etc.) enrolled UMich, making the formative assessment criteria unable to adapt to the

challenges of multiculturalism e.g. discussions about colonialism and geopolitical conflicts. Huyser (1975) conducted a questionnaire survey of students who enrolled in 1971 at UMich and found that 14% of the students were Muslim. Their religious beliefs imposed higher requirements on clothing standards for physical education courses such as swimming, indirectly affecting the assessment scores of this group of students. However, the number of research subjects in Huyser's (1975) research was too large, including approximately 352 freshmen who enrolled at UMich in 1971. Thus, his research conclusions are not representative and may also pose a risk of participant privacy leakage. Therefore, these incompatibilities, which are primarily manifested in unequal resource allocation, some significant cross-cultural differences and conflicting religious beliefs etc. forced UMich to further reform its physical education course evaluation criteria.

3.1.3. Body Sovereignty Assessment

Adler (1991) and Ferree (2003) were both influenced by the “Anti-Discipline Theory² (Foucault, 1975)” within feminist thought during the same period and explored the concept of training compliance within process-oriented evaluation criteria, but their focuses differed. Adler (1991) employed ethnographic qualitative research methods to conduct a three-year participatory observation study of six universities in the eastern United States including UMich, revealing that both male and female students in these universities' physical education courses exhibited compliance with the absolute authority of the administration. Ferree (2003), on the other hand, used quantitative research methods to analyse data on the obedience of

² Anti-Discipline Theory (Foucault, 1975) mainly consists of the struggle for body autonomy—specifically, the fight for the right to abortion, the right to contraception and reproductive freedom. And it involves embracing body positivity and creating knowledge that belongs to women themselves.

female members of the gymnastics team of UMich, reaching the same conclusion that body sovereignty must be subordinate to institutional management. Beyond that, Ferree (2003) also mentioned the mental health issues of female students in his research, including depression and anxiety caused by long-term pressure of obedience. Both studies, using different research methods, revealed issues of body sovereignty within process-oriented evaluation criteria, making the mental health and body autonomy more important for students, especially for female students.

In 1991, the Department of Physical Education and Health of UMich began to implement body sovereignty assessment, which was a curriculum review mechanism that prioritised students' physical well-being and supplemented it with external reviews. Rendall (1985) and Gelb (1989), prominent feminist educators in Michigan, both conducted research on the UMich's automatic rescheduling of physical education courses for female students during their menstrual periods. They argued that physical discomfort during menstruation is undeniable for female students, affirming UMich's policy of automatically adjusting class schedules for female students during their menstrual periods. Their research also highlighted the further rationalisation of the university's physical education curriculum reforms. However, their research focused solely on the basic physiological needs of women and did not consider the impact of cultural conflicts, resulting in practical limitations for some Asian and African American female students. For example, there are different definitions of "health" and "body": Asian students, mostly influenced by traditional Chinese medicine culture, attach greater importance to the internal balance of the body, while African students may refuse physical examinations due to colonial reasons.

Therefore, between 1995 and 2000, some Asian and African American scholars conducted numerous extensive research on cultural conflicts within existing certification standards. Rees et al. (2000) explored the adaption issues of East Asian immigrant students in physical education courses at UMich. The research team found that more than 30% of Japanese and Korean female students couldn't achieve the forward bend standard in yoga classes assessment, resulting in these Asian female students being unable to pass the yoga course assessment. This data reflects that UMich overlooked the cultural tradition of kneeling while eating in Asian countries like Japan and Korea, which prevents the knees from being pressed down (As shown in Figure 1 below). Melnick et al. (1992) also employed the same research methodology to compare most of African American students have more developed leg muscles and tendons due to congenital genetic physical structures, making it harder for them to perform movements that require greater flexibility like leg rotations.

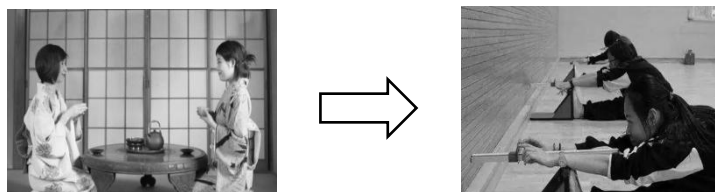


Figure 1. Diagram of Sit-and-Reach Test

Both studies questioned the unreasonable aspects of physical education course evaluation standards from the perspective of their own cultural traditions, prompting UMich to incorporate cultural inclusiveness into the consideration of physical education course evaluation criteria.

Since the 1990s, an increasing number of scholars have noted that the slogan of “Women Helping Each Other (Fisher and Tronto, 1979)” proposed during the second feminism movement exhibited distinct localised characteristics (Smith, 1992). The scope of

the “Women Helping Each Other (Fisher and Tronto, 1979)” was limited to native white students, with little attention paid to immigrant students. Feminist scholars such as Adler (1991) have advocated for the expansion of the scope of “Women Helping Each Other (Fisher and Tronto, 1979)” during the third feminism movement. Siedentop (1994) noted that UMich no longer included the forward bend and Sit-ups as mandatory sports in physical fitness tests due to cultural differences among different groups of women. This expanded the scope of the “Women Helping Each Other (Fisher and Tronto, 1979)” to include East Asian female students. Additionally, Siedentop (1994) noted that UMich included samba dance in physical education elective credits, allowing African American and Latin American female students to fully leverage their athletic advantages. Both studies affirmed the cultural inclusiveness of UMich's physical education course evaluation criteria reform, while also highlighting how the third feminism movement drove the university's physical education course evaluation criteria toward a more comprehensive and inclusive direction. However, Siedentop (1994)'s research focused solely on the assessment criteria themselves and did not consider macro-level issues (e.g. international student admissions and educational philosophy) from the perspective of the university. Yang et al. (1996) made up for this shortcoming, concluding that schools should prioritise students' physical health as the primary assessment criteria, incorporating factors like women's physiological needs and cultural differences, thereby promoting the development of UMich's inclusive educational philosophy.

Feminism has continuously reshaped the evaluation criteria for physical education courses at UMich. From biological determinism to process-oriented evaluation to body sovereignty evaluation, the progressive slogans and ideas generated by two feminist

movements have profoundly influenced the three reforms of its physical education course evaluation criteria. In this research, when counting the number of published essays on physical education curriculum reforms in American universities between the 1990s and 2000s, it was found that over 26% of essays originated from higher education institutions in the states surrounding the Great Lakes including UMich, demonstrating that the concepts of women liberation and body autonomy are more deeply ingrained in developed industrialised regions. However, the limitations of the body sovereignty evaluation criteria, e.g. data dependency and the special circumstances of transgender students, are particularly prominent in the physical education course evaluation criteria of UMich in the 21st century. Jang (2023) and Moríña and Biagiotti (2022) both suggested in their research that transgender students and students with special needs should be included in the physical sovereignty evaluation criteria, with sports course assessment criteria according to their individual differences. However, their research perspectives differ. Jang (2023) approaches the issue from the perspective of special education and rehabilitation science, attempting to apply assistive devices to sports courses; while Moríña and Biagiotti (2022) analyse and critique the existing binary gender framework from the perspectives of body sovereignty and gender studies. Both of them offered suggestions for UMich's physical education course evaluation criteria from different angles, providing diverse insights for curriculum reform.

The research findings of these scholars systematically review and explore the reform of UMich's physical education course evaluation criteria from multiple perspectives, including physiological, psychological, cultural and religious angles etc. The slogans of “Women Helping Each Other (Fisher and Tronto, 1979)” and “Fighting for body autonomy

(Richards, 1984)” have contributed to the reform of UMcih's physical education course evaluation criteria, making women's body autonomy a significant issue in physical education research. These literature sources also provide important references for the research questions in this research on the reform of the UMcih's physical education course criteria, particularly **the Research Handbook on Gender and Diversity in Sport Management** (Markula and Knoppers, 2024), which offers strong insights for this research's consideration of cultural differences. It also facilitates the understanding and development of female body autonomy from a feminist perspective in Research Objective 1.

3.2. Lit Review Theme 2 The Establishment of Women-only Physical Education Courses at the University of Michigan.

3.2.1. The Formation of Early Co-education Models

As early as 1870, UMich had already seen male and female students attending gymnastics classes together (Rudolph, 1965), indicating that by the mid-to-late 20th century, UMich had begun to gradually accept female students participating in physical education alongside male students. However, due to the fact that the United States was in the early recovery stages of the Civil War at the time, higher education policies were subject to fluctuations influenced by different American political ruling parties, resulting in the co-education models not being sustained. However, Rudolph (1965) only revealed the existence of co-education and did not analyse the social and political environment or the effect of such classes. Rhodes (2001) tried to fill the limitations with Rudolph's (1965)

research. Rhodes (2001) compared the physical education policies of two higher education institutions in Michigan State during the 1870s and 1880s (the University of Michigan and the Detroit Automotive College). He found that both universities were under the influence of the **Title IX Act 1972** (US) proposed by the Democratic Party government, and the co-education model was soon banned by the administration of two universities. For a long time thereafter, UMich maintained a teaching model of separate classes for male and female students in its sports courses, until the second feminism movement emerged in the 1970s, breaking this pattern.

The slogan “Opposing the body standards under the male gaze (Summers, 1976)” proposed by the second feminism movement had a profound impact on the teaching of sports courses at UMich. In 1975, female students publicly engaged in discussions with the university president to assert their right to body autonomy. This marked the first time in American history that women's body autonomy was openly discussed as a public issue (Cohen, 1975). It also signalled the awakening of women students' self-awareness. Kaid (1976), who was the female coach of UMich tennis team at the time, expressed support for this phenomenon in her essay and noted that feminism was beginning to influence physical education courses. However, Kaid's (1976) research lacked case studies to support her claims, and the proposed solutions were difficult to implement in practice. Additionally, she did not provide specific explanations on how to apply feminist ideas to classroom practice, limiting the scope of her research. Miyamoto (1980) and Gelb (1989) minimised the limitations of Kaid's (1976) research, respectively detailing the specific application of feminism in physical education courses from the perspectives of class duration and sports programme selection.

Miyamoto (1980) also compared and explained this using the tennis course standards of Wellesley College. Gelb (1989) organised and reflected on the research findings of Kaid (1976) and Miyamoto (1980), pointing out that these were valuable insights derived from the teaching experiences of female educators, with strong practical guidance significance. This indirectly reflects the significant influence of the gender equality ideology proposed by the second feminism movement on physical education courses at UMich.

The second feminism movement exposed the phenomenon of “Unequal pay for equal work (Patel, 1971)” in various aspects of American society, including the workplace, education and healthcare etc., sparking widespread support for slogans of “gender equality (Burns, 1971) and “Fighting for body autonomy (Richards, 1984)”. Freedman and Fico (2005), Harp et al. (2014) and other scholars have also expressed support for the second wave of feminism in their research essays. As the most comprehensive university in U.S., UMich's co-education model has been applied not only to physical education curriculum reform but also to reforms in other compulsory courses. Freedman and Fico (2005) and Carpenter (2008) noted that co-education also appeared in World History and Business Etiquette courses. However, their research primarily focused on the positive impact of the second feminism movement on educational reform, with limited discussion of the resource allocation conflicts and reverse discrimination it may have caused. Harp et al. (2014) further expanded on the research framework of Freedman and Fico (2005) and Carpenter (2008), conducting a statistical analysis of the usage rates of sports equipment by gender at UMich. They found that UMich was forced to cut traditional male sports e.g. Wrestling and Kickboxing, which sparked strong dissatisfaction among male students. Building on Carpenter's (2008) findings,

Harp et al. (2014) concluded that sports funding was excessively biased towards female-dominated sports such as cheerleading. These contradictions forced UMich to reform its sports curriculum in a more rational manner under conditions of gender equality.

3.2.2. A new Body Narrative for Non-male Dominance

Foucault (1975) first redefined the concept of “Human Body” and proposed the assertion that “The body is a site of power.” After conducting in-depth interviews with five female prisoners and five male prisoners in a prison, he argued that the body is no longer a biological entity but rather a surface upon which power relations operate. This assertion was soon incorporated into feminist education research by Diamond and Quinby (1981). They researched seating arrangements in classrooms at Cascade Ridge Elementary School in Seattle and found that male students were generally seated closer to the front than female students, indicating a clear gender binary opposition within the school. However, Diamond and Quinby's (1981) research merely revealed the existence of gender opposition without offering critical analysis or suggestions for improvement. Giroux (1990) addressed this limitation and proposed using personality standardisation tests to reasonably allocate classroom needs for male and female students. He also applied the assertion that “The body is a site of power.” to physical education courses at UMich, arguing that every student, especially female students, has the right to autonomously choose their sports activities.

UMich's physical education courses already contained various implicit mechanisms of female discipline Prior to the 1970s. UMich student newspaper (1964) recorded that 164 male students and 24 female students had chosen track and field courses (e.g. Long-distance

running and High jump). Scholars e.g. Gould and Voelker (2010) and Broglio et al. (2017) expressed different opinions on this record. Gould and Voelker (2010), as track and field coaches, argued in their essay that due to physiological differences between men and women, women have weaker physical abilities and jumping capabilities than men, so it is normal for fewer women than men to choose track and field courses. However, Broglio et al. (2017) questioned their research conclusions. She argued that sports courses should primarily focus on project evaluation results and daily training performance, and pointed out that sports courses in American public universities generally have a male-centered assessment orientation. But Broglio et al. (2017) were unable to verify their research conclusions due to length constraints, leaving their findings open to interpretation. Siedentop and Mars (2022) validated the research conclusions of Broglio et al. (2017). After conducting field interviews with 30 female students from three universities in the Great Lakes region of the United States including UMich, she concluded that all three universities' physical education courses exhibited gender segregation in sports programmes. Certain ball sports (e.g. Tennis and Badminton) imposed strict dress code requirements on female students, resulting in unfair treatment of female body autonomy. Manninen and Campbell (2022) and Yani et al. (2024) have affirmed the findings of Siedentop and Mars (2022) in subsequent essays and extended their conclusions to cultural subjects such as Language and Mathematics.

However, this research found that the methodological approaches in the aforementioned research literature are relatively limited. Some research literature relies too heavily on official school records and course manuals, with little to no information on female students' performance and needs in physical education classes, making it difficult for

subsequent scholars to identify the resistance strategies employed by female students against disciplinary mechanisms at the time. To minimise this research gap, feminist educators like Gao (2025) have conducted specific research and critical reflections on these resistance strategies. His research broadly revealed the authentic experiences of female students within the framework of traditional educational discipline. Gao (2025) focuses not only on physical resistance behaviours exhibited by female students in physical education classes but also on psychological resistance and rejection. These strategies are primarily manifested in female students' self-worth perception, questioning of stereotypes and communication skills within team collaboration.

Therefore, to shape a new narrative of the female body, scholars can not merely focus on single-behaviour analysis but must deeply study into cultural and psychological dimensions through multi-perspective research to effectively improve physical education teachers' classroom strategies. Instead, there is a greater focus on the actual needs and interests of female students, aiming to achieve equitable teaching in physical education classes. The findings of Lopiano (2000) and Cohen (2005) are worthy of reference and consideration by subsequent scholars. They not only pay attention to the selection of classroom content but also highlight the shortcomings of the existing teaching methods and evaluation systems at UMich. This is an area that many scholars have overlooked. By strengthening gender equality education across the entire university, implementing fun sports activities and teamwork models and inspiring each student's athletic potential, So every student can feel understood and respected. Thus, the two feminism movements have driven the cultural development of gender equality awareness at UMich, marking a significant

breakthrough in physical education in terms of gender equality.

The two feminism movements directly led to a new, non-male-dominated narrative of the body in UMich's physical education courses. The **Title IX Act of 1972** (US) prohibited gender discrimination in federally funded educational programmes. The enactment of this official act brought about a fundamental transformation in the power structure of UMich's physical education courses. Lopiano (2000) and Cohen (2005) both confirmed this conclusion in their research, though their methods of argumentation differed. Lopiano (2000) employed quantitative analysis to statistically summarise the content of mandatory physical education courses at UMich from 1970 to 1975, concluding that traditional female-dominated activities such as Ballet and Latin Dance gradually achieved parity with ball sports, indicating that female students' rights to participate in sports were gradually being safeguarded; Cohen (2005) employed case analysis to examine the athletic attire of male and female first-year tennis students at UMich between 1982 and 1984, finding that female students were permitted to wear skirts or shorts to class, reflecting the emerging awareness of female students' body autonomy. Both researches confirm from different angles that after the second feminism movement, UMich gradually began to consider male and female students as equals, no longer prioritising the needs of male students in physical teaching.

A new body narrative not dominated by males formally emerged after the third feminism movement. The elimination of physical evaluations for female students became a key focus of many scholars' research. Suggs (2006) researched the reform of UMich's physical education course grading criteria in 1986, finding that the "Male/Female" option was removed from the student evaluation form and replaced with activity intensity levels

(Level 1-5). Additionally, weightlifting courses were renamed “Body strength reconstruction courses (Michigan Course Record, 1993)” and taught separately based on the different physiological structures of men and women. These research findings demonstrate the influence of female individual diversity from the third feminism movement on the reform of physical education courses at UMich. However, Suggs (2006)'s research only analysed grading criteria and had a narrow research perspective, making its conclusions non-applicable. Zimbalist (2017) made up for the limitations of Suggs' (2006) research. She analysed the practical implementation of female individual diversity in the UMich's physical education courses from three aspects: Body fat percentage monitoring, Exercise grouping and Healthy diet. Zimbalist's (2017) research provides a more comprehensive analysis of the impact of the third feminism movement on physical education courses, offering more persuasive conclusions compared to Suggs' (2006) research.

The transition in UMich's physical education courses from a single male-centered body narrative to a new and non-male-dominated body narrative reflects the significant promotional role of the two feminism movements in enhancing the body autonomy awareness of female educators and female students. However, both feminist movements were conducted within a white female-centered framework (Joyce, 2017), paying little attention to the body sovereignty of Black women, East Asian women and other ethnic woman, thereby undermining the diversity and inclusiveness of physical education, hindering the fair distribution of physical education resources and exhibiting a certain degree of incompleteness. Therefore, to ensure that educational resources are equitably accessible to all female students, the establishment of women-only physical education courses of UMich effectively reached

the reasonable demand of female students for a “safe teaching space (Schlachter, 1971)” as outlined in Objective 2.

3.2.3. Development of Woman-only Physical education courses at UMich

Two feminism movements have gradually brought feminist theories and ideas into the mainstream. The efforts of female students at UMich to achieve body liberation and autonomy have also grown increasingly strong. Lai and Ralph (1995), Colebrook (1997) and other scholars have pointed out in their research that after the 1986 reform of UMich's physical education curriculum, the number of female students enrolling in ball sports and combat sports significantly increased, indicating that female students were more concerned about their own physical needs. However, these activities inevitably involved intense physical contact with male instructors and male students, resulting in some female students being injured or treated unfairly. Lai and Ralph (1995) and Colebrook (1997) both conducted in-depth interviews with an equal number of male and female students on this issue and concluded that in physically intense sports, the injury rate among women is higher than that among men. But their conclusions inevitably have some limitations. They were based solely on interviews with research participants, and respondents' answers may have been influenced by factors e.g. their social class, education level and social behaviour etc., affecting the authenticity and accuracy of their responses. To minimise the limitations of Lai and Ralph (1995) and Colebrook (1997), Burrow (2009) divided 20 female students into focus groups to observe their behavioural patterns in physical education classes, thereby solving the issue of sample homogeneity in individual interviews. Burrow (2009)' s findings also indicated that

female students' physical and psychological safety is compromised to some extent in certain physical education courses. Therefore, the conclusions of the above researches all highlight the necessity of providing female students with a safe and stable teaching environment.

The racial and cultural backgrounds of female students on campus are the primary considerations in physical course design. Gardner (2016) conducted a statistical analysis of the racial and religious affiliations of female students at UMich in 1991. Aside from white female students, African American, Asian American and Latin American female students accounted for approximately 23%, with about 8% being Muslim. Therefore, since 1992, UMich has offered women-only physical education courses, including swimming and water polo as elective courses, allowing female students from all backgrounds to choose based on their individual circumstances.

Through the writing of a literature review on women-only physical courses at UMich, this research revealed that most publicly available literature on this topic was concentrated between 1989 and 2004, a period coinciding with the peak of the third feminism movement. This suggests that the third feminism movement spurred significant scholarly research into feminism education and physical education. Ensign and Panke (2002) and Furham et al. (2001) provided recommendations for the design of women-only physical education course content. Ensign and Panke (2002) introduced the "Women's Menstrual Cycle Scale (Berlin et al., 2001)" from Wellesley College into UMich's women-only physical education courses, suggesting that physical training be grouped according to women students' menstrual cycles to ensure adequate rest during menstruation; Furham et al. (2001) analysed previous physical education course assessment standards, arguing that assessment criteria for women-only

physical education courses should be adjusted and improved based on women's physiological tolerance limits to ensure that female students can engage in physical exercise under comfortable physical conditions. However, the studies by Ensign and Panke (2002) and Furham et al. (2001) only provided recommendations from a physiological perspective, without considering the impacts of factors e.g. race, religion and family backgrounds. Franzini and Spears (2003) supplemented and improved upon these studies from both methodological and conclusional perspectives. Franzini and Spears (2003) randomly distributed questionnaires to 50 female students at UMich to investigate their family economic status. Their research found that over half of the families were below the middle class, making it difficult to sustainably provide sports equipment for physical education courses. In response to this situation, **the University of Michigan Yearbook 2007** (US) noted that women-only physical education courses primarily focused on team sports e.g. basketball, football and volleyball, thereby reducing expenses for schools and families while maximising the provision of a safe and stable learning environment for female students.

In addition to exploring course content, some scholars have also focused on the teaching methods and future development of women-only physical education courses. Chapa et al. (2022) integrated mind-body integration concepts, emphasising the role of exercise in physical sensation and emotional regulation, and incorporated yoga and Pilates into cheerleading instruction; Patel (2021) incorporated ACL protection (a kind of female sports injury prevention) into basketball and other ball sports instruction, developing female-specific sports rehabilitation courses tailored to female physiological structures. This study reviewed the teaching records of UMich's women's basketball course (Coppa, 2022)

and found that ACL protection had already been included in its 2022 teaching records, indicating that UMich had adopted Patel's (2021) recommendations and applied them to classroom instruction. Additionally, the introduction of Peer Coaching (Telford et al., 2021) as a new teaching method has become a unique feature of UMich's women's physical education courses. Telford (2021) divided female students into a control group and an experimental group based on whether there was teacher intervention during gymnastics classes. He found that Peer Coaching was more effective for learning lower-difficulty movements e.g. stretching, jumping and supporting. However, his research was conducted in an ideal classroom environment, and his conclusions are somewhat one-sided, overlooking the potential risks of Peer Coaching instruction. Ellmer (2025) built upon Telford's (2021) research to point out that the Peer Coaching method may lead to gendered emotional labour issues, where instructors must take on additional emotional support tasks (e.g. comforting frustrated peers), yet these tasks are not included in the final assessment criteria, significantly increasing the instructors' classroom workload. Therefore, based on the above literature, it can be concluded that the transformation of teacher roles and the stratification of classroom tasks are key to the optimisation and reform of women's physical education classes at UMich.

Excepting for providing a safe teaching environment for female students, women's physical education classes at UMich should also focus on research into the integration and innovation of teaching technologies. Miller et al. (2025) noted that since the beginning of the 21st century, the development of AI-driven sports technology and VR-based scenario training has brought new opportunities and challenges to women's physical education courses at UMich. Lutsenko et al. (2025) used virtual scenario surfing classes as an example to illustrate

that VR technology can help address the high environmental requirements of sports like sailing and surfing, thereby increasing the variety of options available in physical education courses. However, their study also found that women-only physical education courses of many universities faced ethical controversies and structural challenges. Miller et al. (2025) and Lutsenko et al. (2025) both noted in their studies that completely separating male and female students for instruction can lead to conflicts between teachers and students, particularly psychological imbalances among male teachers. Additionally, Lutsenko et al. (2025) found that establishing women-only physical education classes could result in unequal distribution of teaching resources. However, their research conclusions overly emphasise a gender binary framework, which may lead to imbalances in school teaching models. Therefore, in 2006, UMich announced that it would only maintain separate classes for men and women in track and field, swimming and gymnastics, while all other sports would be taught together. This approach balances the need for a safe teaching environment for female students with the rational allocation of teaching resources to the greatest extent possible.

Woman-only Physical education courses differ from co-educational physical courses in many aspects e.g. curriculum contents, teaching methods, assessment criteria and teaching technologies. This research also effectively fulfils the exploration of the similarities and differences between both as required in Objective 3. Guided by the principle of "health and grace", woman-only Physical education courses focus on teaching female students about posture, physical health and mental well-being (Chapa et al., 2022). Under the guidance of teachers, they also attempt to introduce the teaching method of peer coaching. However, students' own emotional issues (e.g. frustration, unsociability and introversion) need to be

taken into consideration. In recent years, female-only physical education classes have also been influenced by technologies like AI and VR, integrating more closely with computer technology. This not only enhances the convenience of teachers' instruction but also enables female students to learn about cutting-edge technological means.

3.3. Lit Review Theme 3 The development of women's professional sports teams of UMich.

Female physical education in American universities was managed by the AAU (Amateur Athletic Union) of each state for a long time. Since the AAU is a non-profit and amateur organisation, it lacked specialised equipment and dedicated instructors. Additionally, the AAU did not recognise women's professional sports teams, and women's sports were considered extracurricular activities (Telford et al., 2021; Miller et al. 2025). As a result, women's sports teams in American universities were excluded from the official physical education system (Cahn, 1993). The enactment of the **Title IX Act of 1972** (US) directly promoted the professionalisation of women's sports education programmes in American universities and mandated that universities provide female students with equal opportunities to participate in sports as men. As a member of the NCAA (National Collegiate Athletic Association), UMich was among the early beneficiaries of the Title IX Act. DeLay (1999) analysed the training model of the UMich women's tennis team from 1995 to 1998 and pointed out that the **Title IX Act of 1972** (US) and the third feminism movement significantly promoted the development, expansion, and funding of women's sports programmes at UMich, laying a solid foundation for cultivating high-level athletes.

3.3.1. A professional development path combining Competition, Academics and Business

The **Title IX Act 1972** (US) stipulated that all US universities, including public, private, religious and community colleges etc. could establish their own assessment criteria to select female high school graduates with athletic talent. This research used UMich as an example. UMich established the University of Michigan Athletics Department and the Title IX Office in 1979 to improve its student-athlete selection mechanisms (Sompolinsky, 1979), breaking the long-term tradition of only recruiting male athletes.

A scientifically structured training system and high-level competitions have contributed to the high-quality development of UMich's female professional sports teams. Student-athletes must pass the final exams for at least five compulsory courses each semester to be eligible to compete (Sompolinsky, 1979). Shelton (1991) and Madrigal and James (1999) employed different research methods to analyse this requirement and reached different conclusions. Shelton (1991) conducted classroom observations of 16 female volleyball players at UMich over the course of a semester. He found that requiring female student-athletes to pass five compulsory course exams within one semester was too demanding and suggested reducing the requirement to three courses to ensure a balance between academics and training. This was a relatively one-sided and narrow assessment. Madrigal and James (1999) refuted Shelton's (1991) research conclusions. Madrigal and James (1999) argued that female student-athletes should engage in training and competitions after completing their academic assessments. They used quantitative research methods to statistically evaluate the classroom focus of 11 female basketball players and found that over half of the players were capable of passing five compulsory course exams. Both Shelton

(1991) and Madrigal and James (1999) conducted significant explorations into the “Competition + Academics” development path for female student-athletes at UMich.

However, their studies only identified the issues with this regulation without proposing specific solutions or strategies, thereby both researches inevitably exist clear limitations. To overcome these shortcomings, Micelotta and Washington (2018) first proposed using “professional practice credits” to solve this issue in their research. They suggested that if a female student could achieve a top ranking in high level competitions like WNBA and meet course requirements, they could earn credits for that course, with a maximum of six credits. This is a highly feasible proposal that could effectively alleviate the pressure on all student-athletes between competition and academics, particularly serving as an excellent promotional tool for specialised admissions at sports powerhouses like UMich. This proposal was also put forward against the backdrop of the third feminism movement, challenging traditional gender stereotypes and embodying the ideology of women's body and individual liberation. Close cooperation between the federal government, universities and coaching teams has also promoted the standardised training of female student athletes. Due to its significant influences, the U.S. Federal Higher Education Commission officially included it as one of the reference criteria for undergraduate graduation in 1999.

Since the 1990s, the third feminism movement has directly contributed to the rapid growth of the cosmetics and fashion industries in the United States. According to the NCAA Statistics (2011), almost 67% of female college athletes in the United States between 1990 and 2010 were selected by major brands for magazine modelling and advertising campaigns due to their striking appearance and tall stature. This directly reflects how commercial

photography has increasingly become an integral part of the academic and social lives of female college athletes in the United States, prompting universities to incorporate commercial photography into their professional development pathways. Sack and Staurowsky (1998) conducted a quantitative analysis by randomly distributing questionnaires to 15 female athletes at UMich. The results showed that 10 female athletes participated in two or more advertising shoots during the semester, while the remaining five athletes delayed their shoots due to tight competition schedules. This research finding holds significant reference value. Using UMich as an example, it vividly illustrates that an increasing number of female college athletes are integrating commercial shoots into their training schemes, while also reflecting society's growing acceptance and openness toward female beauty. Duderstast (2009), building on Staurowsky (1998), conducted interviews with cheerleading coaches at three universities in Michigan. The findings revealed that sports brands like Adidas and Nike prefer to collaborate with university women's professional sports teams for shoots, as they believe group shots yield better results than individual ones. Duderstast (2009)'s research conclusions complement and refine Staurowsky (1998)'s findings, with both studies arguing the significant influence of commercial photography from the perspectives of individual athletes and university professional sports teams. Staurowsky (1998) used interviews to study athletes and brand managers separately, finding that commercial shoots bring substantial income to both athletes and the brand, while also enhancing the athletes' visibility. Meanwhile, Duderstast (2009) employed quantitative data analysis to statistically analyse the number of advertising shoots involving UMich female student team from 2000 to 2005. The findings indicated that commercial shoots can to some extent enhance the training motivation of

UMich female student team members, thereby facilitating their achievement of better results in professional competitions.

However, some scholars have expressed concerns about this trend. Broglio et al. (2017) noted in their essays that excessive advertising shoots could disrupt female college athletes' academic progress and training schedules. They also found that certain cosmetics products can have adverse effects on female athletes' skin and body functions. Undoubtedly, their research conclusions are worthy of affirmation and attention, as they significantly impact the recruitment and training programmes for sports-specialised students at universities. It directly related to the selection and training of athletes with special talents at universities in the United States. But they may also pose certain challenges for student management. And it probably creates bottlenecks in the established management model and increase the difficulty of management work. To balance academics, training and commercial filming, the University of Michigan and Brown University have pioneered regulations stipulating that student athletes or professional sports teams may not participate in more than two brand filming sessions per semester. Female student athletes are prohibited from endorsing cosmetics containing sweat gland-blocking ingredients (e.g. mascara and makeup remover) (Wong, 2010). It is also essential to strengthen communication and interaction with female student athletes. Methods such as holding seminars can be used to promptly understand their views and opinions on school management, which will help the school to make timely improvements. This regulation provides specific guidelines for commercial endorsements by student athletes and sports teams at UMich, and other universities in the United States should learn from and adopt such practices. It is worth mentioning in this research that universities

should also establish a comprehensive system for handling violations. Once student athletes or coaching teams are found to be endorsing products that violate regulations, they should be subject to appropriate penalties. This will not only serve as a means of supervision and deterrence, but also promote positive cooperation between schools and enterprises, thereby avoiding negative impacts on universities.

3.3.2. Display of women's team competitive ability

Feminism encourages women to fully embrace their physical abilities and athletic potential, particularly through the third feminism movement, which advocates for women's body autonomy and individual liberation. These ideas have had a significant impact on the improvement of women's team athletic performance in American universities. The third feminism movement marked a fundamental breakthrough compared to the second one. It no longer focused solely on securing participation opportunities or legal equality for women but aimed to fundamentally challenge the prevailing notion of male dominance in American sports. It sought to cultivate athletes' sense of agency and social responsibility, shaping a new direction for sports development that integrates body politics, competitive training and institutional power.

As an Ivy League university renowned for its sports programmes, UMich places great emphasis on the competitive training and competitions of its female sports teams. Feltz et al. (2013) analysed in their research that between 1999 and 1994, UMich underwent multiple renovations of training facilities, locker rooms, and rehabilitation centres for the use of its women's teams. UMich also provides free competition attire and transportation for women's

teams. This indicates that UMich provides women's teams with material resources equivalent to those of men's teams. Master et al. (2021) supported the findings of Feltz et al. (2013) from the perspective of scholarship applications. Master et al. (2021) conducted a comparative analysis of scholarship applications at four universities in the eastern United States, including UMich, and found that all four universities offered the same number of scholarship spots to outstanding female high school athletes as they did to male high school athletes. The findings of Master et al. (2021) directly reflect the concept of gender equality in sports in the United States, highlighting the high priority universities place on the development of female student athletes following the third feminism movement.

Additionally, UMich hired a professional coaching team to enhance the overall competitive strength of its women's teams. This was made possible by increased federal funding for university sports education following the enactment of the **Title IX Act of 1972** (US), enabling UMich to secure sufficient funds to hire top coaching teams for systematic training of its women's teams. Wong (2010) noted in his research that between 1990 and 1995, nine professional coaching teams provided guidance to the UMich's football, basketball and tennis male and female teams. Wong (2010)'s research conclusions directly indicated that UMich conducted sports activities fairly under conditions of gender equality, while also granting female athletes equal physical autonomy and freedom of development. However, Wong (2010)'s research relied solely on quantitative data collection to illustrate the UMich's cultivation of women's teams, neglecting the negative impacts of the social context and the development of the American professional system at the time, resulting in a certain degree of bias in its conclusions. But upon reviewing other relevant literature, it was found that most

studies only employed quantitative research methods for analysis, lacking qualitative research methods e.g. classroom visits and participant observation.

However, through reviewing other relevant literature, it was found that prior to 2012, most scholars primarily employed quantitative research methods for analysis, lacking qualitative research methods e.g. classroom visits and participant observation etc. In recent years, some scholars have gradually recognised this limitation and have begun to adopt a combined approach of quantitative and qualitative research in their literature to gain a more comprehensive understanding of the development of women's sports at universities at UMich and other universities in the United States (Pack et al., 2021; Carson et al., 2023). The use of this integrated research method helps schools recognise the social and cultural factors underlying physical training and provides a comprehensive perspective for sports education research. For example, Carson (2023) found in her study that despite the school providing professional guidance on training funds and sports equipment, female students still faced a certain degree of bias and discrimination in traditional family environments. Most of this discrimination came from parents and male peers, causing irreversible harm to the physical and mental health of female students.

Therefore, this research advocates incorporating gender equality education as a compulsory course at UMich. Specialised lectures or seminars could be organised to enhance the awareness of gender equality among all faculty and students. For female athletes, UMich could establish a dedicated sports discipline oversight committee to ensure that women train in a fair and equal environment. So current literature on women's sports teams in American universities suffers from a lack of case studies and a narrow research perspective, which need

to be further supplemented and improved in future studies.

In the 21st century, the standardised development of student athletes and university teams has gradually attracted attention from the field of sports education. American sports training experts e.g. Lee and Opio (2011) and Smith et al. (2016) have provided useful suggestions on how universities can develop systematic competitive programmes. Lee and Opio (2011) were the first to introduce the sports academic advisor system into the training of sports-talented students at Stanford University, helping athletes develop course schedules and career plans. Research found that this system effectively integrated the dual identities of student-athletes as both students and athletes, helping them reasonably plan their time between competitive events and academic responsibilities. However, Lee and Opio (2011), who had long served as the physical trainer for Stanford University's men's basketball team, had limited understanding of the physiological needs and athletic psychology of female student-athletes, so the initial sports academic advising system benefited male athletes more. This also meant that female athletes did not fully benefit from the sports academic advising system when it was first proposed (Lee and Opio, 2011). To overcome these shortcomings, some scholars began to adjust and optimise the system based on their own teaching experience to enhance its applicability in various universities. Smith et al. (2016) built upon Lee and Opio's (2011) study, incorporating women's physiological health into the sports academic advising system based on factors such as menstrual cycles and uterine development. They piloted and promoted this system at universities like the University of Iowa and UMich in order to achieve positive results. Their study found that the implementation of a sports academic advisory system led to improvements in both the physiological health levels and

training outcomes of female athletes. While Smith et al. (2016) confirmed and expanded upon the conclusions of Lee and Opio (2011), both studies focused solely on the perspective of female athletes, neglecting the importance of medical teams in sports training, resulting in a rather narrow research perspective. After reviewing relevant literature on university medical teams, this research found that there is currently a limited amount of research in this area, with most published literature focusing on sports rehabilitation. Therefore, the impact of medical teams on female athletes is an important direction for future research.

Currently, more and more American universities are beginning to recognise the importance of women's physical health to competitive athletes. Major universities and medical institutions are also seeking mutual cooperation. The sports academic advisory system plays an important regulatory role in the training of athletic scholarship students and school teams at American universities, particularly in promoting the healthy physical development of female student athletes, providing personalised training programmes for female student athletes. It also fully reflects the athletic abilities of female students as outlined in Objective 4.

CHAPTER 4. Discussion and Interpretation

This research mainly adopted the method of literature review to investigate the reforms of physical education courses and the reshaping of female body narratives at UMich from the 1970s to the 2000s. It conducted literature search using three keywords: “Female Physical Education”, “UMich Female Sports” and “Feminism”, and then sequentially compared and analysed the literature in accordance with the relevant requirements of the four

objectives. It was found that UMich implemented a series of groundbreaking reforms in the context of two feminism movements, resulting in the development of new course models and educational systems. Gender equality in physical education was the most significant reform. Following the third feminism movement, UMich successfully transitioned from a “male-dominated” to a “gender-equal” teaching philosophy. Especially after the enactment of the **Title IX Act 1972** (US), UMich achieved a better balance between male and female students in terms of resource allocation, programme design and participation in competitions for physical education courses. This research analysed the three different physical education course evaluation criteria at UMich from the 1970s to the 2000s and found that the number of course options has increased compared to previous periods. While the number of courses has increased, the types of programmes have also diversified. For example, in 1984, new competitive sports e.g. women's rugby, ice hockey and water polo were added (Diamond and Quinby, 1984), allowing female students to also experience the thrill of competitive sports.

Additionally, the proportional allocation of sports facilities is one of the new findings of this research. Through an analysis of previous literature, it is evident that the majority of scholars have focused on changes in course content and teaching methods (Medynskyi, 2017; Konukman et al., 2010), with few scholars paying attention to the use of sports equipment and facilities after curriculum reform. Therefore, this research, based on existing literature and combined with publicly available information from the NCAA (National Collegiate Athletic Association, as shown in Figure 2 below), found that the allocation of gyms and swimming pools shifted from being primarily for male students to being allocated based on the actual needs of both male and female students. This represents the significant impact of

the ideology of women's body autonomy and individual liberation on the gender equality of American university physical education.

Analysis

Our team conducted interviews of NCAA personnel, worked extensively with the GEC and the Tool and reviewed other, relevant documents. This allowed us to assess whether the NCAA has addressed, or is otherwise in the process of addressing, Recommendation A.2.

The NCAA has taken significant steps toward data analysis, collection, and maintenance to monitor and improve gender equity. The NCAA re-structured the Managing Director of Business Performance Management's position to explicitly include in the position description the responsibility to improve data analysis on gender equity across all championships. As a result of the NCAA's investment in this restructured position, among other investments, the Tool and other programs and platforms have been developed and implemented to assess and track progress on gender equity issues across the NCAA's various championships. The Tool, as described in more detail in Recommendation A.1, is a system to collect and maintain standardized data to track gender equity across all of the championships. The data is collected each year from the various stakeholders (e.g., Championships Managing Directors, Championships Managers, the NCAA's Office of Inclusion, and/or other personnel) and is standardized because it is based on the criteria from the GEC for assessing gender equity. Thus, the NCAA is making progress toward Recommendation A.2 based on this use of personnel to focus on data analysis and the creation of the Tool to assist in the collection, maintenance, and review of standardized data to analyze gender equity issues.

That said, the Tool does not contain all data of the NCAA relating to gender equity, as it only collects and stores the specific responses to the various questions that track the criteria in the GEC. The Tool is also not a robust database for collecting and storing data. The NCAA continues to maintain data in various platforms and systems across its various departments, which makes the data difficult to capture and catalogue. Thus, there continues to be a need for a data warehouse or other management system to further capture and standardize data so that

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Figure 2. *Analysis of the Gender Equity Assessment* Excerpted segment

This research critically analyses “Segmented teaching” from an East Asian female perspective. “Segmented teaching” is an innovative model of women's physical education at UMich. While many previous studies have examined this model in detail, most scholars have conducted their research from the perspective of white female students (Casey and Macphail, 2018; Wang and Pei, 2015), with survey or interview participants mainly consisting of white female students, and little attention given to immigrant students from diverse cultural backgrounds. As evidenced by the available literature under Theme 2, only three scholars—Kulick et al. (2019), Pot and Hilvoorde (2013) and Harp et al. (2015)—have focused on non-native American students, resulting in a current lack of literature on physical education for immigrant students. This research effectively supplements the content of traditional Chinese sports projects e.g. Tai Chi and martial arts in women's physical education courses from an East Asian female perspective, further exploring how to help East Asian female students better adapt to high-intensity physical activities. Building on this, this

research also solves issues of cultural identity and identity construction among East Asian female students participating in physical education courses. As a direct physical cultural practice, physical education plays a crucial role in fostering students' sense of self-identity and ethnic cultural pride, which helps East Asian students better adapt to the multicultural campus environment in the United States.

Another difference between this research and previous literature is that it analyses the issue from the perspective of front-line female physical teachers. Building on the studies of Freedman and Fico (2005) and Broglio et al. (2017), this research further illustrates that female physical teachers must not only possess solid professional knowledge and teaching skills but also have the ability to communicate across cultures. This is because they need to deeply understand and respect the reasonable needs of female students from different cultural backgrounds during the teaching process and adjust the curriculum accordingly. This research analyses from an East Asian female perspective how the need to sit cross-legged in the dining culture of countries like Japan and South Korea prevents many East Asian female students from completing the sit-and-reach and sit-up tests. It suggests that instructors should replace these tests with others based on their cultural traditions, thereby fully respecting the cultural traditions of countries like Japan and South Korea while ensuring that all students can complete the course assessments smoothly. Additionally, this research proposes that American female physical education teachers engage in regular overseas study visits. Participating in international physical education exchange activities and experiencing diverse cultural contexts of female physical education can help teachers gain a deeper understanding of students' learning behaviours and thinking patterns, thereby facilitating more precise

decision-making in actual teaching practices.

Based on the different religious beliefs of female students, this research suggests that water-related courses e.g. swimming, water polo, and beach volleyball should be set as selective courses. Through a review of previous literature and archives, it was found that previous studies have paid little attention to the impact of differing religious beliefs among female students on physical education instruction (Benn et al., 2011; Joseph and Ainsworth, 2017). They mostly conducted discussions on the setup of water-related courses in American universities based on different regions and individual physical constitutions. Therefore, this research proposes a tentative recommendation to designate swimming, water polo, beach volleyball and other water-based courses as elective options, allowing students to choose based on personal preference. This approach respects their religious beliefs, avoids inconvenience caused by certain religious prohibitions, and ensures that other female students retain the right to select these courses. This research also highlights the need for UMich to establish a comprehensive course management system. For instance, during the course selection phase, UMich could use the academic system to clearly label religious considerations for water-based courses, enabling students to have a clear understanding before selecting such courses. UMich's women-only physical education classes represent a strong implementation of gender equality in American physical education, redefining the narrative of women's bodies under the influence of feminism and advocating for diverse standards of female physical beauty.

Compared to reforms in physical education course evaluation criteria and research on teaching models for women's physical education courses, there is relatively little current

literature on the competitive abilities of female student groups at universities in the United States, including UMich. Existing literature primarily focuses on two aspects: the one is the cultivation of student athletes and another one is coaching teams. In Theme 3, Gao (2005) and Gardner (2016) presented different perspectives on the professional development path combining Competition, Academics and Business for student athletes. Gao (2005) argued that athletes who focus on sports training from a young age have weak cultural foundations and should reduce the number of final exam subjects to alleviate stress; however, Gardner (2016) believes that student athletes are first and foremost university students and secondarily athletes, so they should prioritise academics. Their different viewpoints also reflect different approaches to the development of sports-specialised students in American universities. Especially since the 21st century, the development of sports-specialised students has also faced issues related to commercial endorsements and advertising shoots. However, current literature lacks specific research on the commercial value and future risks of female student-athletes in the United States and other countries.

Therefore, the innovation of this research lies in proposing the inclusion of psychological counselling courses into the sports academic advisory system. This is because, upon reviewing previous research literature, it was found that most studies focus on physical fitness tests, athletic abilities and sports theory for college athletes, neglecting the importance of mental health in competitive sports, especially the psychological fluctuations of female student athletes during the period of menstruation or ovulation. So incorporating psychological counselling courses into sports education serves two purposes: on one hand, it expands the scope of the sports academic advisory system beyond professional guidance in

sports projects; on the other hand, it provides students with psychological health counselling for emotional management and stress relief. Interdisciplinary integrated teaching helps enhance students' comprehensive learning abilities, enabling female student athletes to regulate their psychological states while receiving professional physical training guidance, thereby minimising the impact of psychological stress on competitive performances.

Prior to this research, most studies on physical education at UMich had focused solely on curriculum methodology and physical education textbook reform (Rissler et al., 2014), without considering the social movements and gender differences that drove these reforms. It was also challenging to consider the significant impact of feminism movements and feminist ideas on university physical education courses. However, after deeply studying into the slogans proposed by the two feminism movements between the 1970s and 2000s, “body politics”, “body sovereignty” and “personal liberation”, it became clear that both movements sparked resistance among female university students at UMich and across the United States against gender inequality and institutional barriers. Following the enactment of the **Title IX Act 1972** (US), each state governments and universities also implemented reforms to ensure equal and fair physical education, granting female students the same rights as male students to participate in professional competitive sports. To ensure the comprehensiveness of this research, literature reviews and analyses were conducted from three perspectives: physical education course evaluation criteria, women-only physical education courses and women's professional sports teams. As a traditional powerhouse in sports, UMich has consistently won NCAA collegiate league championships in men's and women's volleyball and football. Beyond rigorous physical training and professional coaching guidance, reforms in

gender-equitable course evaluation methods and rational athlete development models are also indispensable. From public physical education classes to professional team training, the feminism concepts of body autonomy and personal liberation have led UMich to increasingly focus on the unique physiological needs and athletic conditions of female students, providing them with dedicated women's physical education classes and equal training facilities, thereby fully utilising their athletic potential.

Feminism has reshaped the narrative of women's bodies in UMich's physical education system, transitioning it from “Sports Permission” to “Body Autonomy”. UMich's initiatives and plans for reforming physical education for female students are worthy of reference and emulation by other universities in the United States. Studies by Franzini and Spears (2003) and Patel (2001) mentioned that the University of Minnesota and the University of Florida have been influenced by the University of Michigan's gender equality reforms in physical education, thereby enhancing female students' participation in sports activities on campus. Since 1998, the China International Education Association has annually sent university faculty members to top U.S. universities for learning and exchange, and many ideas of Feminism Education have also influenced the educational philosophy of universities in mainland China, promoting gender equality reforms in higher education across China and East Asia.

Due to limitations in scope and time, this research mainly discusses the development of physical education for female students at UMich between the 1970s and 2000s, with the research subjects being female university students who are otherwise typical in all aspects. The research's limitation lies in its failure to explore physical education for special student

groups. However, with the rise of diverse education and special education in the 21st century, UMich began to pay attention to physical education issues for special populations (e.g. students with disabilities or ADHD). Some scholars have also conducted research on physical activities for these groups. Sandford et al. (2022) used the physical education classes of blind students as an example and proposed using professional amplified football to assist their training. The rise of special physical education is a direct reflection of the educational inclusivity and diversity advocated by countries worldwide in the 21st century. As a pioneer in women's physical education reform in the 20th century, UMich has also implemented reasonable physical education course arrangements for students with special needs, ensuring they enjoy equal access to physical activities alongside their peers.

Although UMich has successfully achieved equality in physical education between male and female students, certain risks and challenges still remain. In 2020, some American religious colleges applied for exemptions from the **Title IX Act 1972** (US), leading to a reduction in government budgets for women's physical education. Additionally, following the COVID-19 pandemic, the American economy suffered a severe downturn, causing most universities to prioritise investments in sports projects like men's football and men's tennis, which generate significant commercial benefits. However, sports projects like aerobics and yoga, which are more cost-effective for women, faced difficulties in implementation. The frequent changes in U.S. government leadership have also weakened the stability of the **Title IX Act 1972** (US) enforcement, leaving the future development of women's sports education at American universities, including UMich, facing multiple uncertainties.

CHAPTER 5. Conclusions and Recommendations

This research examines the gender equity reforms in physical education at UMich against the backdrop of two feminism movements, focusing on three aspects: physical education course evaluation criteria, women-only physical education courses and women's professional sports teams. By applying theories e.g. Feminism Education, Educational Psychology for Women and School Physical Education, this research redefines the narrative of women's bodies in UMich's physical education curriculum. By examining policies especially the **Title IX Act 1972** (US) and the **Michigan Education Reform Act 2012** (US), it was found that UMich's physical education reforms received strong support from both the federal government and the state government of Michigan. Additionally, through literature review and analysis, it was found that following the second feminism movement in the 1970s, the evaluation criteria for physical education courses at UMich underwent three transformations (Biological instinctivism evaluation criteria → Process-oriented evaluation criteria → Body sovereignty evaluation criteria), with women's body autonomy and individual liberation becoming integral components of university physical education; After the 1980s, UMich established women-only physical education courses to provide a safe and stable teaching environment for female students. However, this research found that while these courses provided education on women's physiology and sports guidance, an excessive number of women-only physical education courses reduced UMich's funding for traditional male-dominated courses such as American football and mixed martial arts, which was detrimental to the balanced development of various sports.

Additionally, the second feminism movement mainly targeted elite white women,

with limited attention given to Asian and African American women, resulting in a certain degree of bias in UMich's physical education reforms; After the 1990s, the third feminism movement broke through the limitations of the second one, expanding its scope to all women in the United States. The rise of the fashion and modelling industries also prompted UMich to develop a personalised training programme for sports-talented students, developing a path combined Academics, Competition with Business, enabling college athletes to leverage their advantages to secure more sponsorships for the school beyond their grades; The promotion of feminist ideas regarding women's body autonomy and individual liberation has contributed to the maturation of women's sports teams at UMich. By hiring professional coaching teams to provide physical training and specialised guidance for female athletes, UMich has strengthened the competitive capabilities of its women's teams and consolidated its status as a traditional powerhouse in sports. However, this research has found that from the 1970s to the 2000s, sports education reforms at American universities targeted only healthy college students, excluding those with special needs. This is an aspect that university sports education reforms in the 21st century should consider.

UMich's sports education reforms from the 1970s to the 2000s largely achieved gender equality, ensuring that female students had the same rights as male students in terms of programme selection, training facilities and professional competitions. Overall, these reforms were quite successful. They ensured that male and female students had equal opportunities in programme selection, facility use and participation in professional competitions. Moreover, these reform measures have achieved significant results, promoting the development of sports education systems at UMich and other universities in the United

States toward diversity and inclusiveness, enabling all students to demonstrate their athletic potential in a fair and equal environment. However, due to limitations of the times and factors particularly changes in federal government leadership, the rights of female students in sports still remain unstable. Reform measures have been forced to halt due to conflicts with certain religious doctrines, and special needs groups also aspire to engage in regular physical exercise.

This research draws on relevant experiences from the development of physical education disciplines in Chinese universities and physical education courses for female university students in South Korea (Kim and Hodge, 2024), and recommends incorporating psychological counselling courses for women into the physical education curriculum for women at UMich, particularly upgrading the impact of special physiological periods on female professional athletes. During this period, high-intensity physical training could be replaced with traditional Chinese projects such as Tai Chi and martial arts to maintain athletic performance. Increasing the proportion of female leaders and instructors is another reformative suggestion proposed by this research. These measures not only enhance the competitive performance of female student athletes but also strengthen their self-confidence in their abilities, setting an example for young female students entering UMich in the future.

Intersectional research will be an important direction for future studies in women's physical education. Investigating how factors e.g. race, class, culture and sexual orientation influence women's diverse experiences in physical education courses can help design more precise physical education curriculum development plans. Through multi-dimensional intersectional research, physical education teachers can better develop targeted physical

training programmes and support systems for female students. Additionally, with the development of AI technology and Big Data, wearable devices and AI training systems for female athletes will be a major focus of future research (Li and Wang, 2021; Pratiwi and Loviani, 2024). By leveraging technology, female athletes can effectively access equal training resources, enhancing their chances of winning medals in high-profile sports events like the Olympics.

Furthermore, the internationalisation of women's physical education is another future development direction. Data sharing among countries can enable scholars from various nations to access first-hand data for analysis, study common challenges faced in women's physical education across countries, and optimise the allocation of physical education resources. This research also plans to use mental health monitoring Apps to identify potential psychological issues among female athletes and relieve the stress and anxiety caused by competitive sports.

Therefore, this research will continue to monitor the latest developments and progress in women's sports equity reforms at UMich and other universities in the United States, and use AI and visualised data to conduct a comprehensive assessment of these reform measures, providing feasible recommendations and optimisation plans. It is hoped that these studies will help female college athletes better protect their body autonomy in competitive sports and promote their individual development. Additionally, this research will draw on successful cases of gender equality in sports education from other countries, taking into account the specific circumstances of UMich. If conditions permit, this research will seek to establish contact with other sports instructors and student athletes of other universities to ensure that

the proposed reform measures can be effectively implemented.

Regarding potential risks and challenges that may arise during subsequent research, e.g. the social and cultural differences, different religious beliefs and health conditions mentioned above, this research will conduct a specific analysis based on the composition of the student body at UMich to minimise research obstacles. It is hoped that through these efforts, this research can contribute to maintaining a fair and equal sports education environment for female university students, enabling them to fully realise their athletic potential and continuously improve research on gender equality in sports education.

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